

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE J		PAGE OF PAGES 1 86	
2. AMENDMENT/MODIFICATION NO. 0002		3. EFFECTIVE DATE 28-Oct-2002		4. REQUISITION/PURCHASE REQ. NO. W13G86-2259-8360		5. PROJECT NO.(If applicable)	
6. ISSUED BY DEPT. OF THE ARMY N E DISTRICT, CORPS OF ENGINEERS 696 VIRGINIA ROAD CONCORD MA 01742-2751		CODE DACW33		7. ADMINISTERED BY (If other than item 6) See Item 6			
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)				<input checked="" type="checkbox"/> X		9A. AMENDMENT OF SOLICITATION NO. DACW33-03-B-0002	
				<input checked="" type="checkbox"/> X		9B. DATED (SEE ITEM 11) 08-Oct-2002	
						10A. MOD. OF CONTRACT/ORDER NO.	
						10B. DATED (SEE ITEM 13)	
CODE		FACILITY CODE					
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS							
<input checked="" type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input checked="" type="checkbox"/> is not extended.							
Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning <u> 2 </u> copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required)							
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.							
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.							
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).							
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:							
D. OTHER (Specify type of modification and authority)							
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Amendment necessary to revise Bidding Schedule, Specification Sections, and Drawings and to provide a copy of the meeting minutes from the Pre-Bid Conference held on October 22, 2002.							
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
				TEL: _____ EMAIL: _____			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
(Signature of person authorized to sign)				BY _____		29-Oct-2002	
				(Signature of Contracting Officer)			
EXCEPTION TO SF 30 APPROVED BY OIRM 11-84				30-105-04		STANDARD FORM 30 (Rev. 10-83) Prescribed by GSA FAR (48 CFR) 53.243	

AMENDMENT No 0002 OF SOLICITATION DACW33-03-B-0002

1.1 CHANGES TO SOLICITATION OFFER AND AWARD

- a. The Bidding Schedule is deleted and a new Bidding Schedule inserted in its place. The revised Bidding Schedule is inclosed. Use the revised Bidding Schedule for submitting bids.

1.2 CHANGES TO SPECIFICATIONS**1.2.1 Revised Sections**

The sections listed below are deleted and replaced with revised sections of the same section number as indicated. Changes in the text are indicated by additions and deletions. Added text is identified by underscoring and deleted text is identified by overstrike.

DELETE SECTION:

Section 00800
Section 01270
Section 01500
Section 01723
Section 02325

REPLACE WITH SECTION (DATED):

Section 00800 10/28/02
Section 01270 10/28/02
Section 01500 10/28/02
Section 01723 10/28/02
Section 02325 10/28/02

1.3 CHANGES TO DRAWINGS**1.3.1 Revised and Reissued Drawings**

The drawing sheets listed below are deleted and are replaced by revised drawings of the same sheet number and dated as indicated on each sheet. Copies of the revised drawings accompany this amendment:

Ref. No.	Sheet No.	Title
		Providence River and Harbor Maintenance Dredging Providence, Rhode Island
C-12	13	CAD Cell Location and Layout
B-1	14	Probe Locations and Findings
B-3	16	CAD Cell Sections

END OF AMENDMENT No. 0002

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

The previous Bidding Schedule is deleted in its entirety and replaced with the following:

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001		1	Lump Sum	\$	
	MOBILIZATION AND DEMOBILIZATION				
	FFP				
	PURCHASE REQUEST NUMBER: W13G86-2259-8360				

				NET AMT	\$
	FOB: Destination				

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002		2,902,100	Cubic Yard	\$	
	MAINTENANCE DREDGING				
	WITH OCEAN DISPOSAL OF DREDGED MATERIAL				
	*INCLUDES 640,500 CUBIC YARDS OF ALLOWABLE OVERDEPTH				
	FFP				

				NET AMT	\$
	FOB: Destination				

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0003		1,474,000	Cubic Yard	\$	
	CAD CONSTRUCTION				
	WITH OCEAN DISPOSAL OF DREDGED MATERIAL				
	FFP				

				NET AMT	\$
	FOB: Destination				

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0004		215,000	Cubic Yard	\$	\$
	CAD CONSTRUCTION WITH UPLAND DISPOSAL OF DREDGED MATERIAL				
	FFP				

	NET AMT	\$
FOB: Destination		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0005		1,444,100	Cubic Yard	\$	\$
	MAINTENANCE DREDGING WITH CAD DISPOSAL OF DREDGED MATERIAL				
	*INCLUDES 472,400 CUBIC YARDS OF ALLOWABLE OVERDEPTH				
	FFP				

	NET AMT	\$
FOB: Destination		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0006		252,000	Cubic Yard	\$	\$
	MAINTENANCE DREDGING FOR CAD CELL CAPS USING DREDGED MATERIAL				
	FFP				

	NET AMT	\$
FOB: Destination		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0007	UPLAND DISPOSAL AREA J&W DIKE CONSTRUCTION FFP	1	Lump Sum	\$	\$

FOB: Destination

NET AMT \$

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0008	DEBRIS REMOVAL FFP	100	Net Ton (2,000 LB)	\$	\$

FOB: Destination

NET AMT \$

OPTIONAL BID ITEM

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0009	ADDITIONAL CAD CAPACITY FFP CONSTRUCTION WITH OCEAN DISPOSAL OF DREDGED MATERIAL	200,000	Cubic Yard	\$	\$

TOTAL AMOUNT – BASE BID AND OPTIONAL BID ITEM \$ _____

NOTE 1: OPTIONAL BID ITEM – Line Item no. 0009 is an optional bid item and may be exercised by the Government. If the Government chooses to exercise its option for this item a modification will be issued no later than 365 calendar days after receipt of a Notice to proceed with the Contract. A time extension of 30 calendar days will be included in the modification to exercise the option., and all work shall be completed within the time specified in Section 00800, SPECIAL CONTRACT REQUIREMENTS.

NOTE 2: Bidders must bid all items. This work will be awarded as a whole to one bidder, including optional item. The low bidder will be determined based on the price submitted for the base bid and optional bid item. The minimum work awarded will be the base bid.

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DOCUMENT TABLE OF CONTENTS

DIVISION 00 - DOCUMENTS

SECTION 00800

SPECIAL CONTRACT REQUIREMENTS

- 1.1 COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK (APR 1984) FAR 52.211-10
- 1.2 LIQUIDATED DAMAGES - CONSTRUCTION (Sept 2000) FAR 52.211-12
- 1.3 CONTRACT DRAWINGS AND SPECIFICATIONS (AUG 2000) DFARS 252.236-7001
- 1.4 DESIGNATED BILLING OFFICE
- 1.5 BID GUARANTEE (SEP 1996) FAR 52.228-1
- 1.6 PERFORMANCE OF WORK BY THE CONTRACTOR (APR 1984) FAR 52.236-1
- 1.7 OBSTRUCTION OF NAVIGABLE WATERWAYS DFAR 252.236-7002(DEC 1991)
- 1.8 PAYMENT FOR MOBILIZATION AND DEMOBILIZATION (DEC 1991) DFARS 252.236-7004.
- 1.9 QUANTITY SURVEYS. (APR 1984) ALTERNATE 1 FAR 52.236-16
- 1.10 LAYOUT OF WORK (APR 1984) 52.236-17

-- End of Document Table of Contents --

SECTION 00800

SPECIAL CONTRACT REQUIREMENTS

1.1 COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK (APR 1984) FAR 52.211-10

a. The Contractor shall be required to--

- (1) commence work under this contract within 15 calendar days after the date the Contractor receives the notice to proceed,
- (2) prosecute the work diligently, and
- (3) complete the entire work ready for use not later than 570 calendar days after the date the Contractor receives notice to proceed. The time stated for completion shall include final cleanup of the premises. See Article, "SEQUENCING AND SCHEDULING" in Section 01110 SUMMARY OF WORK.

See Section 02325 DREDGING, Article "ORDER OF WORK" for time period work restrictions for the various reaches of the project.

1.2 LIQUIDATED DAMAGES - CONSTRUCTION (Sept 2000) FAR 52.211-12

- (a) If the Contractor fails to complete the work within the time specified in the contract, the Contractor shall pay liquidated damages to the Government in the amount of \$4,000.00 for each calendar day of delay until the work is completed or accepted.
- (b) If the Government terminates the Contractor's right to proceed, liquidated damages will continue to accrue until the work is completed. These liquidated damages are in addition to excess costs of repurchase under the Termination clause.

1.3 CONTRACT DRAWINGS AND SPECIFICATIONS (AUG 2000) DFARS 252.236-7001

(a) The Government will provide to the Contractor, without charge, one set of contract drawings and specifications, except publications incorporated into the technical provisions by reference. The drawings will be provided to the Contractor in electronic or paper media as chosen by the Contracting Officer.

(b) The Contractor shall-

- (1) Check all drawings furnished immediately upon receipt;
- (2) Compare all drawings and verify the figures before laying out the work;
- (3) Promptly notify the Contracting Officer of any discrepancies;
- (4) Be responsible for any errors that might have been avoided by complying with this paragraph (b); and

(5) Reproduce and print contract drawings and specifications as needed.

(c) In general--

(1) Large-scale drawings shall govern small-scale drawings; and

(2) The Contractor shall follow figures marked on drawings in preference to scale measurements.

(d) Omissions from the drawings or specifications or the misdescription of details of work that are manifestly necessary to carry out the intent of the drawings and specifications, or that are customarily performed, shall not relieve the Contractor from performing such omitted or misdescribed details of the work. The Contractor shall perform such details as if fully and correctly set forth and described in the drawings and specifications.

(e) The work shall conform to the specifications, and to the contract drawings identified on the following index of drawings:

<u>Ref No.</u>	<u>Drawing</u> <u>No.</u>	<u>Sheet</u> <u>No.</u>	<u>Title</u>
			PROVIDENCE RIVER AND HARBOR, MAINTNEANCE DREDGING, PROVIDENCE, RHODE ISLAND
C-1		<u>21</u>	Project Key Plan, Index to Drawings, Channel Coordinates, Tidal Datum Planes and Legend

1.4 DESIGNATED BILLING OFFICE

Reference Contract Clause titled "PROMPT PAYMENT FOR CONSTRUCTION CONTRACTS" located in SECTION 00700, CONTRACT CLAUSES. The "designated billing office" will be the Construction Area Engineer, Resident Engineer or project office where the Contracting Officer Representative for this contract is located. The Contractor will be notified of the exact location of this office at the project preconstruction conference specified in Section 01110 SUMMARY OF WORK.

1.5 BID GUARANTEE (SEP 1996) FAR 52.228-1

(a) Failure to furnish a bid guarantee in the proper form and amount, by the time set for opening of bids, may be cause for rejection of the bid.

(b) The bidder shall furnish a bid guarantee in the form of a firm commitment, e.g., bid bond supported by good and sufficient surety or sureties acceptable to the Government, postal money order, certified check, cashier's check, irrevocable letter of credit, or, under Treasury Department regulations, certain bonds or notes of the United States. The Contracting Officer will return bid guarantees, other than bid bonds, (1) to unsuccessful bidders as soon as practicable after the opening of bids, and (2) to the successful bidder upon execution of contractual documents and bonds (including any necessary coinsurance or reinsurance agreements), as required by the bid as accepted.

(c) The amount of the bid guarantee shall be twenty percent of the bid price or \$3,000,000, whichever is less.

(d) If the successful bidder, upon acceptance of its bid by the Government within the period specified for acceptance, fails to execute all contractual documents or furnish executed bond(s) within 10 days after receipt of the forms by the bidder, the Contracting Officer may terminate the contract for default.

(e) In the event the contract is terminated for default, the bidder is liable for any cost of acquiring the work that exceeds the amount of its bid, and the bid guarantee is available to offset the difference.

1.6 PERFORMANCE OF WORK BY THE CONTRACTOR (APR 1984) FAR 52.236-1

The Contractor shall perform on the site, and with its own organization, work equivalent to at least twenty percent (20%) of the total amount of work to be performed under the contract. This percentage may be reduced by a supplemental agreement to this contract if, during performing the work, the Contractor requests a reduction and the Contracting Officer determines that the reduction would be to the advantage of the Government.

1.7 OBSTRUCTION OF NAVIGABLE WATERWAYS DFAR 252.236-7002(DEC 1991)

(a) The Contractor shall-

(1) Promptly recover and remove any material, plant, machinery, or appliance which the contractor loses, dumps, throws overboard, sinks, or misplaces, and which, in the opinion of the Contracting Officer, may be dangerous to or obstruct navigation;

(2) Give immediate notice, with description and locations of any such obstructions, to the Contracting Officer; and

(3) When required by the Contracting Officer, mark or buoy such obstructions until the same are removed.

(b) The Contracting Officer may-

(1) Remove the obstructions by contract or otherwise should the Contractor refuse, neglect, or delay compliance with paragraph (a) of this clause; and

(2) Deduct the cost of removal from any monies due or to become due to the Contractor; or

(3) Recover the cost of removal under the Contractor's bond.

(c) The Contractor's liability for the removal of a vessel wrecked or sunk without fault or negligence is limited to that provided in Sections 15, 19, and 20 of the River and Harbor Act of March 3, 1899 (33 U.S.C. 410 et seq.).

1.8 PAYMENT FOR MOBILIZATION AND DEMOBILIZATION
(DEC 1991) DFARS 252.236-7004.

a. The Government will pay all costs for the mobilization and demobilization of all of the Contractor's plant and equipment at the contract lump sum price for this item.

(1) Sixty percent of the lump sum price upon completion of the Contractor's mobilization at the work site.

(2) The remaining 40 percent upon completion of demobilization.

b. The Contracting Officer may require the Contractor to furnish cost data to justify this portion of the bid if the Contracting Officer believes that the percentages in paragraphs a(1) and a(2) of this clause do not bear a reasonable relation to the cost of the work in this contract.

(1) Failure to justify such price to the satisfaction of the Contracting Officer will result in payment, as determined by the Contracting Officer, of --

(i) Actual mobilization costs at completion of mobilization;

(ii) Actual demobilization costs at completion of demobilization;
and

(iii) The remainder of this item in the final payment under this contract.

(2) The Contracting Officer's determination of the actual costs in paragraph b(1) of this clause is not subject to appeal.

1.9 QUANTITY SURVEYS. (APR 1984) ALTERNATE 1 FAR 52.236-16

a) Quantity surveys shall be conducted, and the data derived from these surveys shall be used in computing the quantities of work performed and the actual construction completed and in place.

(b) The Government will conduct the original and final surveys and make the computations based on them. The Contractor shall conduct the surveys for any periods for which progress payments are requested and shall make the computations based on these surveys. All surveys conducted by the Contractor shall be conducted under the direction of a representative of the Contracting Officer, unless the Contracting Officer waives this requirement in a specific instance.

(c) Promptly upon completing a survey, the Contractor shall furnish the originals of all field notes and all other records relating to the survey or to the layout of the work to the Contracting Officer, who shall use them as necessary to determine the amount of progress payments. The Contractor shall retain copies of all such material furnished to the Contracting Officer.

1.10 LAYOUT OF WORK (APR 1984) 52.236-17

The Contractor shall lay out its work from Government established base lines and bench marks indicated on the drawings, and shall be responsible for all measurements in connection with the layout. The Contractor shall furnish, at its own expense, all stakes, templates platforms, equipment, tools, materials, and labor required to lay out any part of the work. The Contractor shall be responsible for executing the work to the lines and grades that may be established or indicated by the Contracting Officer. The Contractor shall also be responsible for maintaining and preserving all stakes and other marks established by the Contracting Officer until authorized to remove them. If such marks are destroyed by the Contractor or through its negligence before their removal is authorized, the Contracting

Officer may replace them and deduct the expense of the replacement from any amounts due or to become due to the Contractor.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01270

MEASUREMENT AND PAYMENT

PART 1 GENERAL

- 1.1 REFERENCES (Not Applicable)
- 1.2 SUBMITTALS
- 1.3 LUMP SUM PAYMENT ITEMS
- 1.4 UNIT PRICE PAYMENT ITEMS
- 1.5 BIDDING SCHEDULE - PAYMENT ITEMS
 - 1.5.1 BASE BID: Item No. 0001, "Mobilization and Demobilization"
 - 1.5.2 BASE BID: Item No. 0002, "Maintenance Dredging with Ocean Disposal of Dredged Material"
 - 1.5.3 BASE BID: Item No. 0003 "CAD Construction with Ocean Disposal of Dredged Material"
 - 1.5.4 BASE BID: Item No. 0004 "CAD Construction with Upland Disposal of Dredged Material"
 - 1.5.5 BASE BID: Item No. 0005, "Maintenance Dredging with CAD Disposal of Dredged Material"
 - 1.5.6 BASE BID: Item No. 0006, "Maintenance Dredging for CAD Cell Caps Using Dredged Material"
 - 1.5.7 BASE BID: Item No. 0007 "Upland Disposal Area J&W Dike Construction"
 - 1.5.8 BASE BID: Item No. 0008, "Debris Removal."
 - 1.5.9 OPTION ITEM: Item No. 0009, Additional CAD Capacity Construction with Ocean Disposal of Dredged Material

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section Table of Contents --

SECTION 01270

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 REFERENCES (Not Applicable)

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-05 Design Data

Quantity Surveys

Submit originals of all field notes and all other records relating to the quantity surveys.

1.3 LUMP SUM PAYMENT ITEMS

Payment items for the work of this contract for which contract lump sum payments will be made are listed in the BIDDING SCHEDULE and described below. The lump sum price and payment made for each item listed shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing all work required for which separate payment is not otherwise provided.

1.4 UNIT PRICE PAYMENT ITEMS

Payment items for the work of this contract on which the contract unit price payments will be made are listed in the BIDDING SCHEDULE and described below. The unit price and payment made for each item listed shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing all work required for each of the unit price items. Submit originals of all field notes and all other records relating to Quantity Surveys.

1.5 BIDDING SCHEDULE - PAYMENT ITEMS

Payment items for the work of this contract on which the contract progress payments will be based are listed in the BIDDING SCHEDULE and are described below. All costs for items of work, which are not specifically mentioned to be included in a particular Bidding Schedule lump sum or unit price payment item, shall be included in the listed lump sum item most closely associated with the work involved.

1.5.1 **BASE BID:** Item No. 0001, "Mobilization and Demobilization"

a. Payment will be made for costs associated with mobilization and demobilization for dredging operations, as defined in Special Contract Requirements clause "PAYMENT FOR MOBILIZATION AND DEMOBILIZATION."

b. Unit of measure: lump sum (LS).

1.5.2 **BASE BID:** Item No. 0002, "Maintenance Dredging with Ocean Disposal of Dredged Material"

a. The contract price per cubic yard for Item No. 0002 "Maintenance Dredging with Ocean Disposal of Dredged Material" shall include all costs associated with the excavation and ocean disposal of suitable maintenance material within the navigation channel, as specified in Section 02325 DREDGING and as indicated on the contract drawings.

b. The total amount of material removed and paid for under the contract for this Item, will be measured by the cubic yard in place by computing the volume between the bottom surface shown by soundings of the last pre-dredge survey made immediately before dredging begins and the bottom surface shown by the soundings of a post-dredge survey made as soon as practicable after the removal of the material, including that within the limits of the side slopes and specified channel overdepth as described in Section 02325 DREDGING, paragraph OVERDEPTH AND SIDE SLOPES, less any deductions that may be required for misplaced material described in paragraph DISPOSAL OF EXCAVATED MATERIAL.

c. Monthly partial payments will be based on approximate quantities determined by Contractor quality control surveys. The pre-dredge survey made immediately before dredging and the post-dredge survey made as soon as practicable after the removal of the material will be performed by the Government at no cost to the Contractor.

d. Unit of measure: cubic yard (CY).

1.5.3 **BASE BID:** Item No. 0003 "CAD Construction with Ocean Disposal of Dredged Material"

a. The contract price per cubic yard for Item No. 0003 "CAD Construction with Ocean Disposal of Dredged Material" shall include all costs associated with the excavation and disposal of materials, suitable for ocean disposal, which is necessary for the construction of the Confined Aquatic Disposal cells, as specified in Section 02325 DREDGING and as indicated on the contract drawings. This item does not include excavation and disposal of unsuitable maintenance material required to be removed prior to excavation of the suitable material.

b. The total amount of material removed and paid for under the contract for this Item, will be measured by the cubic yard in place by computing the volume between the bottom surface shown by soundings taken after the removal of the unsuitable maintenance material made immediately before dredging begins and the bottom surface of the cells shown ~~on the drawings in the table below~~, including that within the limits of the side slopes as ~~shown on the drawings, described in Section 02325 DREDGING, paragraph OVERDEPTH AND SIDE SLOPES~~, less any deductions for sand and gravel material used for upland disposal and any deductions that may be required for misplaced material described in paragraph DISPOSAL OF EXCAVATED MATERIAL. Overdepth measurement and payment will not be made for material excavated

below the cell limits indicated ~~on the drawings~~ in the table below and for sideslopes..

SUITABLE MATERIAL CELL EXCAVATION DEPTHS

Cell Number	Lower Limits of CAD Cells (MLLW)
1R	79
2R	88
3R	90
4R	88
5R	88
6R	102
7R	120
3AR	94

c. Monthly partial payments will be based on approximate quantities determined by Contractor quality control surveys. The pre-dredge survey made immediately before dredging, and the post-dredge survey made as soon as practicable after the removal of the material, will be performed by the Government at no cost to the Contractor.

d. Unit of measure: cubic yard (CY).

1.5.4 BASE BID: Item No. 0004 "CAD Construction with Upland Disposal of Dredged Material"

a. The contract price per cubic yard for Item No. 0004 "CAD Construction with Upland Disposal of Dredged Material" shall include all costs associated with the excavation and disposal of native sands and gravel to the upland disposal site from the CAD cells, as specified in Section 02325 DREDGING, and as indicated on the contract drawings. This item does not include excavation of suitable and unsuitable maintenance material required to be removed prior to excavation of the native material. Note that the material disposed at the J&W upland site will be limited to mechanical offloading. Hydraulic offloading of dredged material will not be permitted.

b. The total amount of material removed and paid for under the contract for this Item, will be measured by the cubic yard in place. The total quantity of dredged material for which payment will be made will be the theoretical quantity between the ground surface before placement of the dredged material and a ground survey made after placement and dewatering of the dredged material. Measurement for payment will include the dredged material used for construction of the dike.

c. Monthly partial payments will be based on approximate quantities determined by Contractor quality control surveys. The pre-disposal survey made immediately before placement of dredged material, and the post-disposal survey made as soon as practicable after the the material is dewatered, will be performed by the Government at no cost to the Contractor.

d. Unit of measure: cubic yard (CY).

1.5.5 BASE BID: Item No. 0005, "Maintenance Dredging with CAD Disposal of Dredged Material"

a. The contract price per cubic yard for Item No. 0005, "Maintenance Dredging with CAD Disposal of Dredged Material" shall include all costs associated with the excavation and disposal of unsuitable maintenance material and excavation and disposal of unsuitable material for

construction of ~~in~~ CAD cells, as specified in Section 02325 DREDGING and as indicated on the contract drawings.

b. Except for excavation of unsuitable ~~maintenance~~ material from CAD cells, which is covered in Article "c" below, the total amount of material removed and paid for under the contract for this Item, will be measured by the cubic yard in place by computing the volume between the bottom surface shown by soundings of the last pre-dredge survey made immediately before dredging begins and the bottom surface shown by the soundings of a post-dredge survey made as soon as practicable after the removal of the material, including that within the limits of the side slopes and specified channel overdepth as described in Section 02325 DREDGING, paragraph OVERDEPTH AND SIDE SLOPES, less any deductions that may be required for misplaced material described in paragraph DISPOSAL OF EXCAVATED MATERIAL.

c. For excavation of unsuitable material for construction of the CAD cells, the total amount of material removed and paid for under the contract under this Item, will be measured by the cubic yard in place by computing the volume from the bottom surface shown by soundings of the last pre-dredge survey and the required bottom surface elevations shown in the table below. Measurement or payment will not be made under this Item for material excavated below the cell "Lower Limits of Unsuitable Material" listed in the table below.

UNSUITABLE MATERIAL CELL EXCAVATION DEPTHS

Cell Number	Lower Limits of Unsuitable Material (MLLW)
1R	48
2R	47
3R	44
4R	46
5R	47
6R	46
7R	47
3AR	48]

d. Disposal includes placement of the stored unsuitable ~~maintenance~~ material from the first starter cell construction into the completed cells and placement of the unsuitable material excavated from subsequent cells into the open cells.

e. Monthly partial payments will be based on approximate quantities determined by Contractor quality control surveys. The pre-dredge survey made immediately before dredging of the unsuitable maintenance material and the post-dredge survey made as soon as practicable after the removal of the unsuitable material will be performed by the Government at no cost to the Contractor.

f. Unit of measure: cubic yard (CY).

1.5.6 BASE BID: Item No. 0006, "Maintenance Dredging for CAD Cell Caps Using Dredged Material"

a. The contract price per cubic yard for Item No. 0006, "Maintenance Dredging for CAD Cell Caps Using Dredged Material" shall include all costs associated with the excavation and disposal of approximately ~~265,000~~ 252,000 cubic yards of suitable maintenance material for CAD cell caps, as specified in Section 02325 DREDGING. The location for dredging the cell cap material is indicated on the contract drawings.

b. The total amount of material removed and paid for under the contract for this Item, will be measured by the cubic yard in place by computing the volume between the bottom surface shown by soundings of the last pre-dredge survey made immediately before dredging begins and the bottom surface shown by the soundings of a post-dredge survey made as soon as practicable after the removal of the material, including that within the limits of the side slopes and specified channel overdepth as described in Section 02325 DREDGING, paragraph OVERDEPTH AND SIDE SLOPES.

c. Additional Government and Contractor surveys shall be performed in the indicated CAD cell cap material dredging area to determine that the necessary volume for cell cap coverage has been excavated and disposed. Additional Government and Contractor surveys shall also be performed for cell cap thickness and coverage determination, as specified in Section 02325 DREDGING.

d. Monthly partial payments will be based on approximate quantities determined by Contractor quality control surveys. The pre-dredge survey made immediately before dredging and the post-dredge survey made as soon as practicable after the removal of the material will be performed by the Government at no cost to the Contractor.

e. Unit of measure: cubic yard (CY).

1.5.7 **BASE BID:** Item No. 0007 "Upland Disposal Area J&W DiKE Construction"

a. Payment will be made for all costs associated with operations necessary for construction of the upland disposal area dike, as shown on the drawings and specified in Section 02330 DISPOSAL AREA CONSTRUCTION.

b. Unit of measure: lump sum (LS).

1.5.8 **BASE BID:** Item No. 0008, "Debris Removal."

a. The contract price per Ton for debris removal from Providence River and Harbor shall include all costs in connection with the collection, storage and handling, and the removal from the site and proper disposal of debris recovered from the bottom and all floating debris. Bottom debris includes cables, derelict moorings, broken and abandoned pilings, line, and all objects which, in the opinion of the Contracting Officer, are unsuitable for placement in the in-channel disposal cells or the Ocean Disposal Site. Generally, all floating debris and bottom debris larger than 10 feet in any dimension will be considered unsuitable for disposal in cells or ocean dumping.

b. Unit of Measure: Ton (2,000 pounds)(TN).

1.5.9 **OPTION ITEM:** Item No. 0009, Additional CAD Capacity Construction with Ocean Disposal of Dredged Material

a. The contract price per cubic yard for **OPTION ITEM:** "Item No. 0009, Additional CAD Capacity Construction with Ocean Disposal of Dredged Material" shall include all costs associated with the excavation and disposal of suitable materials necessary for increasing the volume capacity of Confined Aquatic Disposal cell Number 3AR. The additional volume capacity may be necessary to allow non-Federal dredging projects, having permits from the Corps of Engineers and 401 Water Quality Certifications from the State of Rhode Island to dredge, to dispose of their dredged

material in CAD cell 3AR. The work shall be performed as specified in Section 02325 DREDGING and as indicated on the contract drawings. This item does not include excavation and disposal of unsuitable maintenance material.

b. The total amount of material removed and paid for under the contract for this Item, will be measured by the cubic yard in place by computing the volume between the bottom surface shown by soundings taken before dredging begins to achieve the additional cell capacity and the required bottom surface of the cell shown in the table below, including that within the limits of the side slopes as described in Section 02325 DREDGING, paragraph OVERDEPTH AND SIDE SLOPES, less any deductions that may be required for misplaced material described in paragraph DISPOSAL OF EXCAVATED MATERIAL. Overdepth measurement and payment will not be made for material excavated below the cell depth limit indicated in the table below.

ADDITIONAL CAD CELL CAPACITY EXCAVATION DEPTH

<u>Cell Number</u>	<u>Lower Limit of CAD Cell (MLLW)</u>
<u>3AR</u>	<u>105</u>

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section --

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SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01500

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

- 1.1 SUBMITTALS
- 1.2 SITE PLAN
- 1.3 EMPLOYEE PARKING
- 1.4 AVAILABILITY OF UTILITIES
- 1.5 SANITATION
- 1.6 TELEPHONE AND TWO-WAY RADIO SERVICE
- 1.7 BULLETIN BOARD, PROJECT SIGN, AND PROJECT SAFETY SIGN
 - 1.7.1 Bulletin Board
 - 1.7.2 Project and Safety Signs
- 1.8 CONTRACTOR'S TEMPORARY FACILITIES
 - 1.8.1 Administrative Field Offices
 - 1.8.2 Storage Areas
 - 1.8.3 Supplemental Storage Area
 - 1.8.4 Appearance of Trailers
 - 1.8.5 Maintenance of Storage Area
 - 1.8.6 Security Provisions
- 1.9 GOVERNMENT FIELD OFFICE
 - 1.9.1 Resident Engineer's Office
 - 1.9.2 Trailer-Type Mobile Offices
 - 1.9.3 Parking for Government Vehicles
- 1.10 CLEANING DURING CONSTRUCTION
 - 1.10.1 Daily Cleaning
 - 1.10.2 On-Site Container
 - 1.10.3 Removal of Waste
 - 1.10.4 Burning
- 1.11 CLEANUP
- 1.12 RESTORATION OF STORAGE AREA

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

-- End of Section Table of Contents --

SECTION 01500

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Site Plan; G, C.

Sketch of the proposed location and dimensions of any area to be used by the Contractor for storage and staging, the number of trailers to be used, avenues of ingress/egress to the areas and details of improvements.

SD-02 Shop Drawings

Temporary Electrical System; G, C.

Sketch of the proposed temporary electrical system.

1.2 SITE PLAN

The Contractor shall prepare a site plan indicating the proposed location and dimensions of any area to be fenced and used by the Contractor, the number of trailers to be used, avenues of ingress/egress to the fenced area and details of the fence installation. Any areas which may have to be graveled to prevent the tracking of mud shall also be identified. The Contractor shall also indicate if the use of a supplemental or other staging area is desired.

1.3 EMPLOYEE PARKING

Contractor employees shall park privately owned vehicles in an area designated by the Contracting Officer. Contractor employee parking shall not interfere with existing and established parking requirements of the facility.

1.4 AVAILABILITY OF UTILITIES

Provide service required for construction operations. All water and electricity that may be required in the prosecution of the work shall be furnished by the Contractor at his own expense. There will be no Government furnished water or electricity at the project site.

1.5 SANITATION

Adequate sanitary conveniences of a type approved for the use of persons

employed on the work shall be provided, properly secluded from public observation, and maintained by the Contractor in such a manner as required or approved by the Contracting Officer. These conveniences shall be maintained at all times without nuisance. Upon completion of the work, the conveniences shall be removed by the Contractor from the premises, leaving the premises clean and free from nuisance.

1.6 TELEPHONE AND TWO-WAY RADIO SERVICE

Provide telephone service to field offices. Provide and maintain two-way radio or equal means of communication between the Contractor's operating plant and equipment and field offices. Such means of communication shall be accessible during all work hours. The devices shall be made available for use by Government personnel.

1.7 BULLETIN BOARD, PROJECT SIGN, AND PROJECT SAFETY SIGN

1.7.1 Bulletin Board

Immediately upon beginning of work, the Contractor shall provide a weatherproof glass-covered bulletin board not less than 36 by 48 inches in size for displaying the Equal Employment Opportunity poster, a copy of the wage decision contained in the contract, Wage Rate Information poster, and other information approved by the Contracting Officer. The bulletin board shall be located at the project site in a conspicuous place easily accessible to all employees, as approved by the Contracting Officer. Legible copies of the aforementioned data shall be displayed until work is completed. Upon completion of work the bulletin board shall be removed by and remain the property of the Contractor.

1.7.2 Project and Safety Signs

The requirements for the signs, their content, and location shall be as shown on the drawings attached at the end of this section. The signs shall be erected within 15 days after receipt of the notice to proceed. The data required by the safety sign shall be corrected daily, with light colored metallic or non-metallic numerals. Upon completion of the project, the signs shall be removed from the site.

1.8 CONTRACTOR'S TEMPORARY FACILITIES

1.8.1 Administrative Field Offices

The Contractor shall provide and maintain administrative field office facilities within the construction area at the designated site.

1.8.2 Storage Areas

A storage area will be provided to the Contractor. ~~The location of the area will be given to the Contractor at the prework conference.~~ The storage area is located on the property of 101 India Street directly to the east of the former night club called Shooters. The size of the site is approximately 190 feet by 125 feet. The area is a paved parking lot, and there is access to the Seekonk River. There are pilings for a finger pier system. There may or may not be concrete floats in place for use at the commencement of work. Area will be made available for two office trailers, pickup truck parking, and other minor materials. The Contractor shall confine his storage areas to the limits as designated or approved by the Contracting Officer and shall be responsible for the security of the areas.

Upon completion of the contract, the Contractor shall remove all equipment and materials, except as otherwise specified, and restore the site to its original condition as approved by the Contracting Officer at no additional cost to the Government.

1.8.3 Supplemental Storage Area

Upon Contractor's request, the Contracting Officer will designate another or supplemental area for the Contractor's use and storage of trailers, equipment, and materials. This area may not be in close proximity of the construction site. The Contractor shall be responsible for cleanliness and orderliness of the area used and for the security of any material or equipment stored in this area. Utilities will not be provided to this area by the Government.

1.8.4 Appearance of Trailers

Trailers utilized by the Contractor for administrative or material storage purposes shall present a clean and neat exterior appearance and shall be in a state of good repair. Trailers which, in the opinion of the Contracting Officer, require exterior painting or maintenance will not be allowed in the storage area.

1.8.5 Maintenance of Storage Area

Fencing, if used or required, shall be kept in a state of good repair and proper alignment. Should the Contractor elect to traverse, with construction equipment or other vehicles, grassed or unpaved areas which are not established roadways, such areas shall be covered with a layer of gravel as necessary to prevent rutting and the tracking of mud onto paved or established roadways; gravel gradation shall be at the Contractor's discretion.

1.8.6 Security Provisions

Adequate outside security lighting shall be provided at the Contractor's temporary facilities. The Contractor shall be responsible for the security of its own equipment.

1.9 GOVERNMENT FIELD OFFICE

1.9.1 Resident Engineer's Office

The Contractor shall provide the Government Resident Engineer with an office, approximately ~~200~~ 720 (12X60) square feet in floor area, located where directed and providing space heat, electric light, telephone, and power, and toilet facilities consisting of one lavatory and one water closet complete with connections to water and sewer mains. A portable toilet may be substituted for the water closet. A mail slot in the door or a lockable mail box mounted on the surface of the door shall be provided. The Contractor shall also provide a separate trailer or equivalent space large enough for a conference room. The conference room will be available to the Contractor, and to the Government on an as needed basis. At completion of the project, the office shall remain the property of the Contractor and shall be removed from the site. Utilities shall be connected and disconnected in accordance with local codes and to the satisfaction of the Contracting Officer.

1.9.2 Trailer-Type Mobile Offices

The Contractor may, at its option, furnish and maintain a trailer-type mobile offices acceptable to the Contracting Officer and providing as a minimum the facilities specified above. The trailers shall be securely anchored to the ground at all four corners to guard against movement during high winds.

1.9.3 Parking for Government Vehicles

The Contractor shall reserve a minimum of 6 parking spaces for use by the Government.

1.10 CLEANING DURING CONSTRUCTION

1.10.1 Daily Cleaning

Execute daily cleaning to keep the work, the site, and adjacent properties free from accumulation of waste materials, rubbish, and windblown debris, resulting from construction operations.

1.10.2 On-Site Container

Provide on-site containers for the collection of waste materials, debris, and rubbish.

1.10.3 Removal of Waste

Remove waste materials, debris, and rubbish from the site periodically and dispose of off Government property in accordance with all applicable laws and regulations.

1.10.4 Burning

No burning of brush or debris will be permitted at the site.

1.11 CLEANUP

Construction debris, waste materials, packaging material and the like shall be removed from the work site daily. Any dirt or mud which is tracked onto paved or surfaced roadways shall be cleaned away. Stored material not in trailers, whether new or salvaged, shall be neatly stacked when stored.

1.12 RESTORATION OF STORAGE AREA

Upon completion of the project and after removal of trailers, materials, and equipment, areas used by the Contractor shall be restored to the original or better condition. Gravel used to traverse grassed areas shall be removed and the area restored to its original condition, including top soil and seeding as necessary.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

-- End of Section --

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SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01723

FIELD ENGINEERING FOR DREDGING

PART 1 GENERAL

- 1.1 SUMMARY
 - 1.1.1 Engineering Services
- 1.2 REFERENCES
- 1.3 DEFINITIONS
 - 1.3.1 Survey Datum
- 1.4 SUBMITTALS
- 1.5 GENERAL HYDROGRAPHIC SURVEY REQUIREMENTS
- 1.6 HORIZONTAL POSITIONING PROCEDURES AND ACCURACIES
- 1.7 ELECTRONIC TRACKING SYSTEM (ETS) FOR DREDGING AND OCEAN DISPOSAL VESSELS
 - 1.7.1 ETS Standards
 - 1.7.2 Data Requirements and Submissions
 - 1.7.3 ETS
- 1.8 REFERENCE HORIZONTAL CONTROL DATA
- 1.9 DEPTH MEASUREMENT PROCEDURES AND CALIBRATION
 - 1.9.1 Depth Measurement Precision and Accuracy
- 1.10 VERTICAL REFERENCE DATUMS
- 1.11 FIELD DATA RECORDING, REDUCTIONS, ARCHIVING, AND PLOTTING REQUIREMENTS.
- 1.12 VOLUME COMPUTATIONS
- 1.13 MISCELLANEOUS QUALITY CONTROL PROCEDURES
 - 1.13.1 Automated System Synchronization Checks

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

- 3.1 CONTRACTOR SURVEYS
 - 3.1.1 Personnel
 - 3.1.2 Contractor Quality Control Surveys
 - 3.1.3 Bathymetric Surveys at CAD Cells
 - 3.1.4 Contractor Progress Payment Surveys
- 3.2 GOVERNMENT SURVEYS
 - 3.2.1 Government Quantity Surveys
 - 3.2.2 Government Quantity Calculations
 - 3.2.3 Final Examination by the Government
 - 3.2.4 Final Acceptance by the Government

-- End of Section Table of Contents --

SECTION 01723

FIELD ENGINEERING FOR DREDGING

PART 1 GENERAL

1.1 SUMMARY

1.1.1 Engineering Services

The Contractor shall furnish the required personnel, equipment, instruments, and transportation, as necessary to accomplish the required surveys. Reports and other data together with supporting material developed during the prosecution of the work shall be furnished to the Government. The Contractor shall also provide adequate professional supervision and quality control to assure the accuracy, quality, completeness, and progress of the work.

The Contractor shall provide and pay for the following field engineering services for the project:

- a. Hydrographic and other survey work specified or required in execution of this project, except for surveys performed by the Government, as indicated in these specifications.
- b. Civil, structural or other professional engineering services specified, or required to execute Contractor's construction methods.

1.2 REFERENCES

The publications listed below form a part of this section to the extent referenced. The publications are referenced in the text by basic designation only. The Army Corps of Engineers references below may be viewed or downloaded free of charge via the Internet (<http://www.hnd.usace.army.mil/techinfo/>).

U.S. ARMY CORPS OF ENGINEERS

EM 1110-1-1002	(1996) SURVEY MARKERS AND MONUMENTATIONS
EM 1110-2-1003	(2002) HYDROGRAPHIC SURVEYING
EM 1110-1-2909	(1998; Chg 2) Geospatial Data and Systems

1.3 DEFINITIONS

1.3.1 Survey Datum

The Government will and the Contractor shall perform all surveys using the the survey datum indicated in the General Notes on the drawings.

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Survey Plans; G, C.

The Contractor shall submit, as part of the Quality Control Plan, a detailed plan describing the survey methods to be used during the work. The plan shall include the equipment to be utilized, tidal data, general site plan map, line designation map, calibration procedures to be used, expected horizontal and vertical accuracies, and pertinent information to describe the methods, and results to be obtained. Field surveys shall not begin until these plans are approved.

Layout Plan; G, C.

A complete plan of the dredging areas showing the horizontal layout of all physical and electronic ranges to be used for horizontal control. The drawings shall be drawn at a scale sufficiently large to show all pertinent details. The drawings shall be submitted as blue or black lines on a white background.

Charts..

Current and tide charts to be used for the area(s) being dredged shall be submitted.

Survey Personnel.

Furnish a listing of the personnel who will perform the survey work required by this contract. The listing shall include a brief summary of the hydrographic survey experience of each person. The list shall be submitted prior to the preconstruction conference.

SD-05 Design Data

Field Survey Data.

Submit field data; depth sounder rolls, corrected for tide, and corresponding boat plots; daily logs; and quantity computations. Submit data sufficient for the Government to reproduce the Contractor's survey plot by referring only to this field data.

The electronic field data, including XY coordinates (points), and Z depths (elevations) in ASCII file format, shall be submitted on a daily basis with the CQC reports. Deficiencies shall be corrected and a re-survey of the area shall be performed, as necessary to ensure correction has been achieved. Data shall be submitted in a readable and usable format, utilizing industry recognized standard file formats and extensions. Data shall be submitted with a commercially available software program and technical support to provide the on-site capability to read and print the data.

Electronic Tracking System.

The Contractor shall furnish required discs, CD-ROM, and charts to the Contracting Officer.

1.5 GENERAL HYDROGRAPHIC SURVEY REQUIREMENTS

All hydrographic surveys for this project shall follow the mandatory criteria given in EM 1110-2-1003 for the "Navigation and Dredging Support Surveys" class of survey as a minimum.

Survey lines may be run either perpendicular to the channel limits at 50 foot offsets or longitudinal at 25 foot offsets. The lines shall clearly identify the toe and extend out to a minimum of three times the project depth to accurately depict the side slope.

1.6 HORIZONTAL POSITIONING PROCEDURES AND ACCURACIES

a. Vessel positioning systems utilized on this contract shall conform with the allowable horizontal positioning criteria in EM 1110-2-1003. The positioning system used shall be capable of meeting or exceeding the accuracy requirements and shall not exceed the allowable ranges where indicated. The Contractor may be required to demonstrate to the Government that its positioning system is capable of meeting or exceeding the accuracy requirements in EM 1110-2-1003.

b. All dredges, all survey vessels, and all towing equipment engaged in transport of dredged material, shall be equipped with automated electronic positioning and progress track-plotting equipment having a degree of accuracy commensurate with EM 1110-2-1003. In addition, dredges shall have production recording and efficiency optimizing data collection equipment; capable of storing, plotting, and printing in-situ operational data.

1.7 ELECTRONIC TRACKING SYSTEM (ETS) FOR DREDGING AND OCEAN DISPOSAL VESSELS

The Contractor shall furnish an Electronic Tracking System (ETS) for surveillance of the movement and disposition of dredged material during excavation, ocean transit and disposal; CAD cell excavation and disposal, CAD cell filling and capping; and upland disposal operations. This ETS shall be established, operated and maintained by the Contractor to continuously track in real-time the horizontal location and draft condition of the disposal vessel for the entire dredging cycle, including dredging area and disposal area. The ETS shall be capable of displaying and recording in real-time the disposal vessel's draft and location in an acceptable coordinate system which can be related to, or is directly based on the appropriate state plane coordinate system every 500 feet (at least) during loading cycle and during travel to disposal area, and every minute (at least) or every 200 feet of travel, whichever is smaller, while approaching within 1000 feet and within limits of disposal area.

1.7.1 ETS Standards

The Contractor shall provide an automated (computer) system and components to perform in accordance with EM 1110-1-2909. A copy of the EM can be downloaded at <http://www.usace.army.mil/inet/usace-docs/eng-manuals>. Horizontal location shall have an accuracy equal to +/- 10 feet (horizontal repeatability). Vertical (draft) data shall have an accuracy of +/- 0.5 foot. Horizontal location and vertical data shall be collected in sets and each data set shall be referenced in real-time to date and local time (to nearest minute), and shall be referenced to the same state plane coordinate system used for the survey(s) shown in the contract plans. The ETS shall

be calibrated as required, in the presence of the COR at the work location before disposal operations have started, and at 30-day intervals while work is in progress. The Contracting Officer shall have access to the ETS in order to observe its operation. Disposal operations will not commence until the ETS to be used by the Contractor is certified by the COR to be operational and within acceptable accuracy. It is the Contractor's responsibility to select a system that will operate properly at the work location. The complete system shall be subject to the Contracting Officer's approval.

1.7.2 Data Requirements and Submissions

All data shall be collected and stored on 3-1/2 inch disks or CD-ROM in ASCII format using IBM-compatible MS-DOS 5.0 or later version. Data shall include date, time, trip ID number, vessel name and name of vessel's captain, location and draft of disposal vessel every 500 feet (at least) during loading cycle and during travel to disposal area, and every minute (at least) or every 200 feet of travel, whichever is smaller, while approaching within 1000 feet and within limits of disposal area. Data collected while the disposal vessel is in the vicinity of the disposal area shall also be plotted in chart form, in 200-foot intervals, to show the track and draft of the disposal vessel approaching, traversing, and leaving the disposal area. More than one disposal area trip may be stored on a single disk or CD ROM as long as trip data is indexed and clearly identifiable. The completed, original disk or CD-ROM shall be furnished to the COR within 24 hours. Plotted charts shall be organized and maintained at a central work location for inspection on a daily basis by the COR. Plotted charts shall be organized as directed, bound and submitted weekly to COR for permanent file record.

1.7.3 ETS

The ETS for each disposal vessel shall be in operation for all dredging and disposal activities and shall record the full round trip for each loading and disposal cycle. The Contracting Officer shall be notified immediately in the event of ETS failure and all dredging operations for the vessel shall cease until the ETS is fully operational. Any delays resulting from ETS failure shall be at the Contractor's expense.

1.8 REFERENCE HORIZONTAL CONTROL DATA

At the preconstruction conference, the Government will provide project control from which hydrographic surveys may be extended. This control shall be presumed to meet the accuracy requirements in EM 1110-2-1003. The Contractor shall immediately notify the Contracting Officer if existing control points have been disturbed. In the event new station monumentation is required to perform the work, new stations shall be monumented in accordance with EM 1110-1-1002 criteria, and an equitable adjustment will be made to the contract.

1.9 DEPTH MEASUREMENT PROCEDURES AND CALIBRATION

1.9.1 Depth Measurement Precision and Accuracy

Depth measurements including depth observation precision and resolution shall meet the vertical accuracy standards prescribed in EM 1110-2-1003.

1.10 VERTICAL REFERENCE DATUMS

Depth measurements shall be reduced to the specified datum using concurrent staff/gage readings, as described in EM 1110-2-1003. Tide staffs/gages shall be constructed, referenced, maintained, stilled, and read in accordance with the criteria in EM 1110-2-1003.

1.11 FIELD DATA RECORDING, REDUCTIONS, ARCHIVING, AND PLOTTING REQUIREMENTS.

The data format fields for submitting reduced hydrographic data is x y z. The topographic and feature data shall conform to the intergraph general 3D design file formats specified in the reference. Digital data shall be contained on a 3.5 inch floppy disk or CD-ROM.

1.12 VOLUME COMPUTATIONS

The Contractor shall have the capability to compute excavation quantities from work performed under this contract. The Government will furnish construction templates and limits from which volumes are to be computed using any of the techniques given in EM 1110-2-1003. Section drawings shall be made at the horizontal and vertical scales given in EM 1110-2-1003.

1.13 MISCELLANEOUS QUALITY CONTROL PROCEDURES

1.13.1 Automated System Synchronization Checks

Each automated hydrographic survey system shall be checked to insure adequacy of correlation between position and depth. Methods for performing this check are given in EM 1110-2-1003.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 CONTRACTOR SURVEYS

3.1.1 Personnel

3.1.2 Contractor Quality Control Surveys

The Contractor shall examine his work by conducting hydrographic surveys at no more than 30-day intervals, upon completion of separable portions of the work, and upon completion of the entire work. Contractor quality control surveys shall also be performed and submitted to the Contracting Officer prior to any request for a Government survey for final acceptance. The Contractor shall prepare survey maps based on the results of these surveys.

These maps shall be used, by the Contractor, to satisfy himself of the effectiveness of his operations. Attainment of contract depth shall be verified, and a comparison of actual progress and in-place quantities dredged with scheduled progress shall be performed. Contractor surveys will not be used for final payment or acceptance. See Section 02325 DREDGING for additional Contractor survey requirements.

3.1.3 Bathymetric Surveys at CAD Cells

Bathymetric surveys of each CAD cell shall be conducted at the following intervals: 1) upon completion of removal of unsatisfactory material, 2) prior to placement of any material into the cell, 3) following the last placement of unsuitable material into the cell, 4) just prior to placing the cap, and 5) within 15 days after placement of the cap. A report including the data and an assessment of the data shall be submitted to the

Contracting Officer within 60 days of completion of the surveys. The assessment shall include contoured bathymetry and calculations of the total volume of material placed in each CAD cell.

3.1.4 Contractor Progress Payment Surveys

The Contractor shall conduct surveys for any periods for which progress payments are requested. The Contractor will make the computations based on these surveys. All surveys accomplished by the Contractor shall be conducted under the direction of the Contracting Officer, unless the Contracting Officer waives this requirement for each specific instance. Promptly upon completing a survey, the Contractor shall furnish the all data relating to the survey to the Contracting Officer, who will use the data as necessary to determine the amount of progress payments.

3.2 GOVERNMENT SURVEYS

3.2.1 Government Quantity Surveys

The Contracting Officer will conduct the original and final surveys for all dredging areas and make all quantity computations based on those surveys. The surveys will be performed at no expense to the Contractor, except as noted in paragraph "Final Examination and Acceptance" below and as specified in Section 02325 DREDGING. The Contractor shall give a minimum of 3 days notice before completion of a portion of the work requiring a post-dredge survey. A minimum of 2 days will be required by the Government for completion of each of the post-dredge surveys at the site and another 10 to 15 days for calculation of quantities removed and verification of completion of work.

3.2.2 Government Quantity Calculations

All quantity estimates for dredged material removed will be determined using either single beam or multi-beam survey technology. If single beam technology is used, all edited sounding information obtained from Government pre and post dredge surveys will be used in determining the payable quantity of dredged material removed. If multi-beam survey technology is used, then a 3-foot by 3-foot matrix using the sounding closest to cell center (shot depth) will be generated from the edited multi-beam data and used in determining the payable quantity of dredged material removed. A Digital Terrain Model (DTM) will be created from each of the pre and post dredge surveys. A channel design template will be created at the required dredging depth and at the total allowable overdepth. Each of the channel design templates will be compared with the pre dredge DTM to determine the available quantity of required dredge material and available quantity of overdepth material. The same channel design templates will be compared to the post dredge DTM to determine the quantity of material remaining above the required dredging depth and the quantity of material remaining above the total allowable overdepth. The quantity of required dredged material removed will be derived from these comparisons. If the "box-cutting method of dredging is used to remove dredge material contained in side slopes where "box-cutting is permitted, the channel design templates will be modified to include a "box-cut" width. In all cases, the same channel design templates will be used to determine both the pre and post dredge quantities. Material removed below the total allowable overdepth will not be included in the payable quantity of material.

3.2.3 Final Examination by the Government

a. Submission of all Contractor quality control survey data, including plots, is required prior to performance of final examination and acceptance surveys by the Government.

b. As soon as practicable after completion of the entire work or any section thereof such work will be thoroughly examined at the cost and expense of the Government by sounding or sweeping, or both, as determined by the Contracting Officer. Should any shoals, lumps, or other lack of contract depth be disclosed by this examination the Contractor will be required to remove same by dragging the bottom or by dredging at the contract rate for dredging, but if the bottom is soft and the shoal areas are small and form no material obstruction to navigation, the removal of such shoal may be waived by the discretion of the Contracting Officer. The Contractor will be notified when soundings and/or sweepings are to be made, and may be permitted to accompany the survey party if approved by the Contracting Officer. When the area is found to be in a satisfactory condition, it will be accepted finally. Should more than two sounding or sweeping operations by the Government over an area be necessary by reason of work for removal of shoals disclosed by a prior sounding or sweeping, the cost of such third and any subsequent sounding or sweeping operations will be charged against the Contractor. The rate for each day in which the Government survey plant is engaged in such sounding or sweeping operations and/or is en route to or from the site, or is held, for the Contractor's convenience at or near the site for these operations, shall be \$2,400.00.

3.2.4 Final Acceptance by the Government

Final acceptance of the whole or any part of the work, and the deductions or corrections of deductions made thereon will not be reopened after having once been made, except on evidence of collusion, fraud, or obvious error.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 02 - SITE WORK

SECTION 02325

DREDGING

PART 1 GENERAL

- 1.1 REFERENCES
- 1.2 RELATED WORK SPECIFIED ELSEWHERE
 - 1.2.1 Environmental Protection Requirements
 - 1.2.2 Water Quality Monitoring and Testing
 - 1.2.3 Underwater Diving Operations
- 1.3 DEFINITIONS
 - 1.3.1 Suitable Maintenance Material
 - 1.3.2 Unsuitable Maintenance Material
 - 1.3.3 Native Material
- 1.4 SUBMITTALS
- 1.5 NOTIFICATIONS
 - 1.5.1 Notice of Misplaced Material
 - 1.5.2 Notice of Need for Dredging Survey
 - 1.5.3 Relocation of Navigation Aids
 - 1.5.4 Providence River NOAA Current Meter (ADCP)
 - 1.5.5 Corps Environmental Resources Section
- 1.6 WORK AREA
 - 1.6.1 Access
 - 1.6.2 Interference with Navigation
 - 1.6.3 Protection of Existing Waterways
 - 1.6.4 Adjacent Property and Structures
 - 1.6.5 Artificial Obstructions
 - 1.6.6 No Dredge Zones and No Spud Zones
 - 1.6.7 Protection of Utility Lines
- 1.7 MATERIAL TO BE DREDGED
 - 1.7.1 Material to be Dredged
 - 1.7.2 Results of Subsurface Explorations
- 1.8 QUANTITY OF MATERIAL
- 1.9 OVERDEPTH AND SIDE SLOPES
 - 1.9.1 Required Depth
 - 1.9.2 Allowable Overdepth
 - 1.9.3 Side Slopes
 - 1.9.4 Excessive Dredging
- 1.10 DEBRIS MANAGEMENT PLAN
 - 1.10.1 Release of Oily Material
- 1.11 INSPECTION
 - 1.11.1 Communication During Dredging Operations
 - 1.11.2 Transportation
- 1.12 INSPECTION OF DISPOSAL

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

- 3.1 DREDGING PLANT AND ASSOCIATED EQUIPMENT

- 3.1.1 Dredging Plant
- 3.1.2 Enclosed Clamshell Bucket
 - 3.1.2.1 Enclosed Clamshell Bucket Control
 - 3.1.2.2 Verification of Unsuitable Maintenance Material Removal
 - 3.1.2.3 Equivalent Alternative Dredging Technology
- 3.1.3 Tow Boats
- 3.1.4 Scows
- 3.1.5 Lights
- 3.2 ORDER OF WORK
 - 3.2.1 Environmental Criteria Relative to Dredging
 - 3.2.2 Operational Criteria Relative to Dredging
 - 3.2.3 Restrictions for Dredging Operations at CAD Cells
- 3.3 METHOD OF DISPOSAL
 - 3.3.1 General
 - 3.3.2 Rhode Island Sound Disposal Site (RISDS)
 - 3.3.3 Upland Disposal
 - 3.3.4 Alternative Disposal Sites
- 3.4 SHOALING
- 3.5 FINAL CLEANUP

-- End of Section Table of Contents --

SECTION 02325

DREDGING

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

CORPS OF ENGINEERS (COE)

COE EM-385-1-1 (1996) Safety and Health Requirements Manual

1.2 RELATED WORK SPECIFIED ELSEWHERE

1.2.1 Environmental Protection Requirements

Provide and maintain environmental protective measures during the life of the contract. Also, provide environmental protective measures required to correct conditions, such as oil spills or debris, that occur during the dredging operations. Comply with Federal, State, and local regulations pertaining to water, air, and noise pollution. See Section 01355 ENVIRONMENTAL PROTECTION.

1.2.2 Water Quality Monitoring and Testing

Water quality monitoring and testing will be performed by the Government at no cost to the Contractor. See Section 01135 WATER QUALITY MONITORING BY THE GOVERNMENT.

1.2.3 Underwater Diving Operations

In the event that underwater diving operations become necessary due to the work of this contract, such operations shall be conducted in accordance with CORPS OF ENGINEERS (COE) COE EM-385-1-1 Section 30.

1.3 DEFINITIONS

1.3.1 Suitable Maintenance Material

Suitable maintenance material is defined as organic silty sediments suitable for open water disposal that have accumulated within the areas to be dredged since the last maintenance dredging project. Suitable maintenance material is designated on the drawings. The suitable maintenance material also includes accumulated silty sediment material that sloughs off the side slopes.

1.3.2 Unsuitable Maintenance Material

Unsuitable maintenance material is defined as organic silty sediments, unsuitable for open water disposal that have accumulated within the areas to be dredged since the last maintenance dredging project. Unsuitable maintenance material is designated on the drawings. The unsuitable material also includes sediment material that sloughs off the side slopes from the indicated zones of unsuitable material.

1.3.3 Native Material

Native material is defined as the inorganic silts, sands, and gravel generally located under the maintenance material. Native material shall be removed during the construction of the In-Channel Confined Aquatic Disposal (CAD) cells and from other areas as specified in this Section, and as indicated on the contract drawings.

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Work Plan; G, E.

Submit a work plan for construction of the in-channel CAD cells, channel dredging, and ocean and upland disposal of material. At a minimum, the work plan shall include the following items: anticipated plant and types of equipment, dredging sequence and time schedule, CAD cell locations, CAD cell capacity, temporary material storage methods and locations, expected coordination requirements, survey requirements, material placement for open water and upland disposal, proposed measures for protection of structures, proposed measures to avoid overdredging, and proposed methods for ensuring the removal of all maintenance material prior to dredging the underlying native material.

Enclosed, Clamshell Bucket Performance Data; G, C.

Submit Enclosed Clamshell Bucket Performance Data to the Contracting Officer of approval before commencement of work.

Debris Management Plan.

A debris management plan shall be developed as specified in this section and submitted to the Contracting Officer for review.

Inspection of Disposal.

Submit names of inspectors certified by the Corps of Engineers to be used for monitoring disposal activities for the Government.

Scows.

Submit scow cards for each scow to be used for contract work. Scow cards shall have information specified in paragraph "Scows."

SD-05 Design Data

Equipment and Performance Data.

Furnish proof of electronic positioning equipment calibration to the Contracting Officer.

Daily/Monthly Report of Operations.

Prepare and submit two (2) copies of the Daily Report of Operations, using ENG Form No. 4267, for each dredge. This report shall be submitted on a daily basis. A copy of this form is appended to the end of this Section. In addition to the daily report, the Contractor shall prepare a Monthly Report of Operations for each month or partial month's work on ENG Form No. 4267. The monthly report shall be submitted to the Contracting Officer on or before the seventh day of each month, consolidating the previous month's work. Upon completion of the project, the Contractor shall submit a consolidated project report, combining the monthly reports.

Additionally, one copy of the reports shall be maintained by the Contractor on the dredge(s) for the Contracting Officer's inspection purpose. Further instructions on the preparation of the reports will be furnished at the Preconstruction Conference.

Disposal Positioning Plan; G, C.

Submit a disposal positioning plan, which details the method proposed to position the scows over the disposal cells and to locate the limits of the disposal cells which may be DGPS, laser technology or other means of identifying the scows position and orientation before disposal. A means of visually verifying location, such as computer imaging, shall be integral with the positioning system.

The detailed plan outlining the methods to be used to ensure disposal barges are within the boundaries of the disposal cell during sediment discharge must be submitted to the Contracting Officer for review and approval prior to the commencement of any disposal into the CAD cells.

Cell Capping Plan; G, E.

Submit a cell capping plan defining the sequence and schedule of events, proposed equipment to be used, and the methods to be employed to ensure the proper capping of cells as specified. The plan shall also include the Contractor's proposed methodology to determine the cap thickness and extent of coverage.

Cell Cap Thickness and Coverage Determination Data; G, E.

Submit cell capping thickness and coverage determination data for each cell capped, within 14 days of completion of data collection. Include the data collection methods used and the results obtained in a report format. Provide a certification for each cell that the cell construction is in compliance with the performance requirements of these specifications. If a cell is not in compliance, then state the materials and methods proposed to achieve compliance.

1.5 NOTIFICATIONS

1.5.1 Notice of Misplaced Material

The Contractor shall notify the Contracting Officer and the U.S. Coast Guard Marine Safety Office within 24 hours of any misplaced material.

1.5.2 Notice of Need for Dredging Survey

The Contractor shall give 14 days advance notice, in writing, to the Contracting Officer of the need for a pre-dredging survey or after-dredging survey for final acceptance for each acceptance section.

1.5.3 Relocation of Navigation Aids

The Contractor shall not remove, change the location of, obstruct, willfully damage, make fast to, or interfere with any aid to navigation. The Contractor shall notify the Coast Guard District Commander, in writing, with a copy to the Contracting Officer, 30 days in advance of the time he plans to dredge adjacent to any aids which require relocation to facilitate the dredging operation. A copy of the notification shall be provided to the Contracting Officer.

1.5.4 Providence River NOAA Current Meter (ADCP)

The Contractor shall contact Larry Neeson, NOAA field coordinator for Narragansett Bay PORTS, at 757-436-0200 a minimum of 30 days before start of work in the vicinity of the current meter in the Fox Point Reach for removal of the ADCP. NOAA will remove the ADCP before commencement of dredging in the area.

1.5.5 Corps Environmental Resources Section

The Contractor shall notify Larry Oliver (978-318-8347) of the Corps Environmental Resources Section a minimum of 10 days prior to the initial disposal of material into the CAD cells.

1.6 WORK AREA

1.6.1 Access

The Contractor shall be responsible for providing and maintaining access necessary for his equipment and plant to and from the areas to be dredged, any mooring areas provided the Contractor, and disposal areas. The Contractor shall ascertain the environmental conditions which can affect the access such as climate, winds, currents, waves, depths, shoaling, and scouring tendencies.

1.6.2 Interference with Navigation

Minimize interference with the use of channels and passages. The Contracting Officer will direct the shifting or moving of dredges or the interruption of dredging operations to accommodate the movement of vessels and floating equipment, if necessary. The Contractor shall comply with all requests from the Contracting Officer to move or interrupt dredging operations for a reasonable time period at no additional cost to the Government.

1.6.3 Protection of Existing Waterways

The Contractor shall conduct his operations in such a manner that material or other debris are not pushed outside of dredging limits or otherwise deposited in existing side channels, basins, docking areas, or other areas

being utilized by vessels. The Contractor will be required to change his method of operations as may be required to comply with the above requirements. Should any bottom material or other debris be pushed into areas described above, as a result of the Contractor's operations, the material must be promptly removed.

1.6.4 Adjacent Property and Structures

The Contractor shall conduct the dredging operation such that it does not undermine, weaken or otherwise impair existing structures located in or near the areas to be dredged. Dredging restrictions and setbacks are defined in Article "Restrictions for Dredging Operations at CAD Cells." The Contractor shall investigate the existing structures at the site and plan the dredging work accordingly.

Damage to private or public property or structures resulting from the disposal or dredging operations shall be repaired promptly by the Contractor at his expense. Damage to structures resulting from the Contractor's negligence will result in suspension of dredging and require prompt repair at the Contractor's expense as a prerequisite to the resumption of dredging.

1.6.5 Artificial Obstructions

The Contractor may encounter bottom debris such as, but not limited to, pieces of broken cable, rope, miscellaneous metal, and broken and derelict moorings. The Government has no knowledge of existing wrecks, wreckage, or other artificial obstructions of such size or character as to require the use of explosives for its removal. However, special or additional plant may be required for economical removal of some items, such as boulders. During dredging operations, the Contractor shall remove all debris encountered. Floating debris removed from the dredging area shall be separated and stockpiled for disposal. Disposal in accordance with local, Federal, and State laws and regulations shall be the responsibility of the Contractor. In case the actual conditions differ from those stated or shown, or both, an adjustment in contract price or time of completion, or both, will be made in accordance with "FAR 52.236-2, Differing Site Conditions."

1.6.6 No Dredge Zones and No Spud Zones

When dredging adjacent to the "No Dredge Zones" indicated on the drawings, the Contractor shall install buoys delineating the outline of the no dredge areas to be protected. "No Spud" areas are marked on the contract drawings for protection of known utilities.

1.6.7 Protection of Utility Lines

Existing utility lines that are shown on the drawings or the locations of which are made known to the Contractor prior to dredging, and that are to be retained, shall be protected from damage during dredging, and if damaged, shall be satisfactorily repaired by the Contractor at no additional cost to the Government. Prior to commencement of dredging, the Contractor shall coordinate with the Contracting Officer and the applicable utility company to mark the locations of existing utilities, and establish in detail the proposed method of protecting the existing utilities. In the event that the Contractor damages any existing utility lines that are not shown on the drawings or the locations of which are not known to the Contractor, report shall be made immediately to the Contracting Officer.

If the Contracting Officer determines that repairs shall be made by the Contractor, such repairs will be ordered under the Contract Clause entitled "DIFFERING SITE CONDITIONS."

1.7 MATERIAL TO BE DREDGED

1.7.1 Material to be Dredged

Dredged material is referred to in these specifications as either suitable maintenance material, unsuitable material, or native material. The material to be removed to accomplish the specified dredging work is anticipated to be organic silt, inorganic silts, sands, and gravel. Due to the general geology of the area and the large extent of dredging in the CAD Cells, the Contractor may expect to encounter localized areas of glacial till deposits. The Contractor is expected to examine the site of the work and determine the character of the materials to be dredged.

1.7.2 Results of Subsurface Explorations

Subsurface explorations to determine the character of materials to be removed have been made by the Government in the locations of the CAD cells only. The locations of the borings, typical cross sections and strip logs of the borings are shown on the drawings. See Section 00320 GEOTECHNICAL DATA.

1.8 QUANTITY OF MATERIAL

The total estimated amount of material to be removed from within the specified limits, including side slopes and allowable overdepths is shown on the Bidding schedule. The estimated quantity for bidding purposes and for application of the "FAR 52.212-11, Variation in Estimated Quantity" shall be the total quantity, including overdepth. The quantities listed are estimates only. Within the limits of available funds, complete the work specified whether the quantities involved are greater or less than those estimated.

1.9 OVERDEPTH AND SIDE SLOPES

1.9.1 Required Depth

The material actually removed from within the specific areas to be dredged to a depth of not more than the required depth shown on the drawings, plus the allowable overdepth, will be estimated and paid for in accordance with the provisions contained in Section 01270 MEASUREMENT AND PAYMENT. For construction of CAD cells, overdepth measurement and payment will not be made for material excavated below the cell limits specified in Section 01270 MEASUREMENT AND PAYMENT, and for sideslopes.

1.9.2 Allowable Overdepth

To cover unavoidable inaccuracies of dredging processes, material removed to the overdepth shown on the drawings, for specific areas to be dredged, and within the dredging limits will be measured and paid for at full contract price in the same manner as specified for the overlying dredged material.

1.9.3 Side Slopes

Side slope dredging will be required. Sideslopes in areas of suitable

maintenance material may be dredged in the original position or by dredging the space below the pay slope plane at the bottom of the slope for upslope material capable of falling into the cut. Side slopes in areas of unsuitable maintenance material shall be formed by step cutting. Box cutting along side slopes when dredging unsuitable material will not be permitted. Payment will not be made for material in excess of the amount originally lying above the pay slope plane. The limiting amount of side-slope overdepth will be measured vertically. The above is not to be taken as a guarantee that all slopes will stand on the slopes shown on the drawings. The Contractor shall make his own determination as to what the angle of repose will be on all side slopes.

Dredging on side slopes shall follow, as closely as practicable, the lines indicated on the drawings. An allowance will be made for dredging beyond the lines indicated or specified for side slopes. The allowance will be determined by projecting a line upwards, paralleling the project design side slopes, from the intersection of the overdepth dredging limit at a point located vertically below the limit of dredging at the top of slope. The amount of material excavated from side slopes will be determined by either cross-sections or computer, or both.

1.9.4 Excessive Dredging

Material taken from beyond the limits as extended in the Article "OVERDEPTH AND SIDE SLOPES" above will be deducted from the total amount dredged as excessive overdepth dredging, or excessive side-slope dredging for which payment will not be made.

1.10 DEBRIS MANAGEMENT PLAN

A debris management plan shall be developed, reviewed by the Contracting Officer and followed by the Contractor. Debris removed from the bottom during dredging operations, which is not suitable for disposal at the Rhode Island Sound Disposal Site (RISDS), shall be collected and removed from the site. Unsuitable materials include large items such as timbers, pilings, sections of piers, and metallic debris. Generally, all floating debris and bottom debris larger than 10 feet in any dimension will be considered unsuitable for disposal in CAD cells or ocean dumping. Each day during dredging operations, the Contractor shall use a boat to collect and remove floating debris resulting from project activities. Floating debris shall also be removed from within barges, if applicable. Debris removed from the bottom during dredging operations, shall also be collected and removed from the site. Where pilings or other debris is found to interfere with the enclosed clamshell bucket closure or equipment operation, a conventional clamshell bucket may be used to extract the pilings/debris. Abandoned piles shall be cut or broken off rather than extracted. Sediment removal during such activity shall be minimized to the greatest extent practicable.

Containers for temporary storage of the collected debris shall be maintained on the dredge or support barge.

1.10.1 Release of Oily Material

All oily material released during dredging or other project activity shall be promptly collected and disposed at a licensed facility.

1.11 INSPECTION

Inspect the work, keep records of work performed, and ensure that gages, targets, ranges, and other markers are in place and usable for the intended

purpose. See Section 01451 CONTRACTOR QUALITY CONTROL.

1.11.1 Communication During Dredging Operations

The Contractor shall provide the Government sampling and monitoring crew with a portable two-way radio to notify the dredging crew when the dredging operation is causing unacceptable levels of turbidity in the water column. This is essential to limit transport of unsuitable sediments out of the dredging area. Also provide portable two-way marine radios for communications between the dredge crew, the disposal inspector, and the Contracting Officer.

1.11.2 Transportation

The Contractor shall furnish, at the request of the Government Representative, the use of such boats, boatmen, laborers, and material forming a part of the ordinary and usual equipment and crew of the equipment or marine plant as may be reasonably necessary in inspecting and monitoring the work. The Contractor shall furnish, on the request of the Government Representative, suitable transportation from all points on shore designated by the Contracting Officer to and from the various pieces of plant, and the work site.

1.12 INSPECTION OF DISPOSAL

No disposal shall be done unless a Corps of Engineers Certified Inspector is present. The inspector shall be available on a full-time basis to cover all phases of operations in connection with disposal of the dredged materials.

The Contractor shall be responsible for and provide qualified disposal inspection services at no additional cost to the Government. The Contractor shall notify the Contracting Officer of the names of the Corps of Engineers Certified Inspectors to be used prior to commencement of work.

Every discharge of dredged material must be officially witnessed and properly documented by an onboard inspector who has been trained by, and who holds a current certification from the New England District, Army Corps of Engineers. Failure to adhere to this requirement will be considered a serious violation of this contract and cause for an immediate stop-work order by the Contracting Officer and which could precipitate substantial penalties including but not necessarily limited to fines, withholding of funds and non-payment due to misplaced materials.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.1 DREDGING PLANT AND ASSOCIATED EQUIPMENT

3.1.1 Dredging Plant

All dredging under this contract shall be performed using a mechanical type dredge. Dredge all suitable and unsuitable maintenance material from all reaches of the Federal channel and harbor using an enclosed clamshell bucket dredge and allow no overflow of the scow while it is being filled. Native material, not identified as unsuitable, may be excavated using a conventional bucket. Hydraulic dredging will not be permitted.

3.1.2 Enclosed Clamshell Bucket

Dredging of suitable and unsuitable maintenance material, in the areas indicated on the drawings, shall be performed using an enclosed clamshell bucket. The dredge bucket shall be designed to completely enclose the dredged sediment and water captured. The bucket shall not have teeth. This is to prevent the bucket from digging into the harder native material.

The bucket shall be equipped with escape valves which shut when the bucket is withdrawn from the water column. Submit Enclosed, Clamshell Bucket Performance Data to the Contracting Officer for approval before commencement of work.

3.1.2.1 Enclosed Clamshell Bucket Control

The Contractor shall demonstrate that the dredge operator has sufficient control over bucket depth in the water and bucket closure so that sediment re-suspension from bucket contact with the bottom and due to bucket over-filling can be minimized.

3.1.2.2 Verification of Unsuitable Maintenance Material Removal

The Contractor shall use an enclosed, clamshell bucket to dig to the specified depth of cut shown on the drawings or until refusal in the native material. Diligent efforts are required to ensure that all unsuitable maintenance material is removed by the enclosed clamshell bucket before dredging of the underlying native material with a conventional bucket at the CAD cells. The Contractor shall verify that all unsuitable maintenance materials have been removed from an area before Government surveys are performed and commencement of dredging native material. Such verification may be by survey, by observing the enclosed clamshell bucket as it exits the water, and by care to dredge only to the indicated depth of cut, or by other means as approved by the Contracting Officer.

3.1.2.3 Equivalent Alternative Dredging Technology

Alternatives to the enclosed clamshell bucket technology for the removal of unsuitable maintenance materials will not be considered under this contract.

3.1.3 Tow Boats

All tow boats used for towing to disposal areas shall be equipped with DGPS navigational equipment, radar, corrected compass, marine radio, and depth sounding equipment which is to be maintained in operating condition during each tow. The tow boats utilized by the Contractor for this purpose shall be of a size adequate for towing in heavy seas and shall have necessary reserve power for maneuvering with scows in rough seas and under emergency conditions as well as for control of scows at the disposal point.

3.1.4 Scows

a. Water and dredged materials shall not be permitted to overflow or spill out of scows when dredging maintenance material. Failure to repair leaks or change the method of operation which is resulting in overflow or spillage will result in suspension of dredging operations and require prompt repair or change of operation to prevent overflow or spillage as a prerequisite to the resumption of dredging. Overflow of scows will be permitted when dredging sand and gravel material for construction of CAD cells.

b. The Contractor shall provide and maintain markings on all scows clearly

indicating the draft of the scow and shall provide scow cards for each scow used on the contract work. The scow cards shall show dimensions and volumes of individual pockets of scows and total volumes for varying depths below coaming or top of pockets. This is to enable Government personnel to make a determination of scow volume and corresponding drafts under partial and full load conditions. These measurements are to be made at the time of initial use of each scow. This information will then be furnished to disposal inspectors to enable them to estimate scow volume from draft of scows for each scow being towed to the disposal area. The scow volume estimates are for use in connection with disposal area monitoring studies and are not intended to be used in determining quantities dredged. At the beginning of the work and as additional scows arrive on the project, sufficient time shall be allowed by the Contractor and assistance of Contractor personnel shall be made available by the Contractor for the purpose of obtaining the measurements of each scow under various partial and full load conditions. During the entire period of contract work, the Contractor shall provide and maintain sufficient spot or floodlights to permit the reading of the draft on the sides of scows at bow and stern from the tow boat at night and when visibility is impaired. The draft readings and each pocket/compartment measurement will be required for each scow towed to the disposal area and will be made by the disposal inspector. Measurements are to be taken and recorded prior to departure from the dredge site and upon arrival at the immediate disposal location. The Contractor shall ensure that adequate time is allowed by the tow boat captain for these readings to be obtained.

c. Due to the fine nature of the dredged material, the Contractor shall achieve proper closure and watertightness of pocket doors to eliminate seepage or leakage of material. The use of plastic material to cover cracks in scow pockets will not be allowed.

3.1.5 Lights

Each night, between sunset and sunrise and during periods of restricted visibility, provide lights for floating plants, ranges, and markers. Also, provide lights for buoys that could endanger or obstruct navigation. When night work is in progress, maintain lights from sunset to sunrise for the observation of dredging operations. Lighting shall conform to United States Coast Guard requirements for visibility and color.

3.2 ORDER OF WORK

The Contractor shall start and complete the work in the order of precedence ~~as~~ in accordance with the Contractor's approved "Progress Schedule" required by Section 01110 SUMMARY OF WORK. Environmental and operational criteria relative to the preparation of a work sequence and time schedule are listed below. The Government reserves the right to change the order of work at any time.

3.2.1 Environmental Criteria Relative to Dredging

a. Dredging and disposal work shall not be performed north of Fields Point (Fox Point and upper Fuller Rock Reaches) from February 1 through April 30, inclusive of any year, as indicated on the drawings.

b. Dredging and disposal work shall not be performed between Bullock Point and 3,500 feet downstream of Conimicut Point from February 1 through March 30, inclusive of any year, as indicated on the drawings.

- c. Dredging and disposal work shall only be performed at the portion of the Rumstick Neck Reach beginning approximately 1,300 feet down stream from its northernmost limit to the downstream limit of dredging during March and April, inclusive of any year, as indicated on the drawings. See Article "b" above for an additional restriction during March at this upper 1,300 feet of the Rumstick Neck Reach.
- d. Dredging and disposal work shall not be performed between Sabin Point and Conimicut Point from June 1 through July 14, inclusive of any year.
- e. During all disposal operations, the Contractor shall wait a minimum of one hour between the dumping of each individual scow load within a 1/2 nautical mile radius of the dumping location, or at specific coordinates provided by the Contracting Officer.
- f. The Government will be conducting water column sampling and analysis at various times and locations during dredging and disposal operations. The Contractor shall cooperate with sampling personnel and conduct its disposal operations for sampling events as specified in Section 01135 WATER QUALITY MONITORING BY THE GOVERNMENT.

3.2.2 Operational Criteria Relative to Dredging

- a. Dredge suitable and unsuitable material for all reaches of the federal channel and harbor using an enclosed clamshell bucket dredge and allow no overflow of the scow while it is being filled.
- b. An open bucket may be used to dredge the native silt, sand, and gravel material from the CAD cells. Overflow of the scow while sand and gravel only are being removed from the CAD cells is permissible.
- c. Dredge and temporarily store unsuitable materials from the CAD starter cell. Temporary storage of the unsuitable material shall be the Contractors responsibility. Unsuitable material overlying the area of the initial in-channel disposal cell shall be dredged using an enclosed clamshell bucket and the material temporarily stored in tight scows or other suitable containers within a reasonable distance of the disposal cell.
- d. Dispose of the sand and gravel materials excavated to create the CAD cells for the following uses:
 - (1). Place approximately 215,000 cubic yards of native sand and gravel materials within the upland disposal site. The material disposed at the the Johnson and Wales (J&W) upland disposal site will be limited to mechanical offloading. Hydraulic offloading of dredged material will not be permitted.
 - (2). Place the remainder of the native sand and gravel materials from the CAD cells at the RISDS as a cap material.
- e. Dispose of unsuitable maintenance materials from the Fox Point and Fuller Rock Reaches in the in-channel CAD cells.
- ~~f. Allow non-Federal dredging projects, having permits from the Corps of Engineers and having 401 Water Quality Certifications from the State of Rhode Island to dredge, to dispose of their material in the CAD cells, as directed by the Contracting Officer.~~

fg. Dredge the suitable maintenance material from the Upper Fuller Rock Reach, as shown on the drawings, and use the dredged material to cap the CAD cells after the disposal of unsuitable material in the CAD cells is complete. Also, allow the unsuitable maintenance materials in the CAD cells to consolidate for a minimum of 30 days before the caps are placed. The CAD cells shall be capped with a minimum of ~~three~~ one to not more than three feet of suitable material.. Further, there shall be no mechanical disturbance of the cell caps by means including but not limited to drag bar, clamshell bucket, and barge spudding, unless such disturbance is pre-approved by the Contracting Officer.

gh. At the Rhode Island Sound Disposal Site (RISDS), place all suitable maintenance materials from all reaches of the federal channel, except as noted below. The Contracting Officer will direct the Contractor's disposal operations at the RISDS to require placement of dredged material from lower reaches with lower concentrations of contaminants and silt to be placed on top of and cap the dredged material from upper reaches.

hi. Limit disposal quantities at RISDS of the suitable material removed from the lower Fox Point/Upper Fuller Rock reaches, between Kettle Point and the southern end of the Mobil Terminal, to 3,000 cubic yards per dumping event to avoid exceeding water quality criteria.

3.2.3 Restrictions for Dredging Operations at CAD Cells

a. Wilkes Barre Pier - The site is located on the easterly side of the navigation channel adjacent to CAD Cell 3AR. A dredging restriction will be imposed to limit the dredge elevation depth to -70 MLLW within a distance of 250 feet of this structure.

b. Promet Corporation Pier (Formally known as State Pier No 1) - The site is located on the westerly side of the navigation channel adjacent to CAD Cell 6R. A dredging restriction will be imposed to limit the dredge elevation depth to -70 MLLW within a distance of 250 feet of this structure.

c. Providence and Worcester Railroad South Quay Site - The site is located on the easterly side of Cells 4R and 5R. A dredging restriction of 400 feet will be imposed from the easterly edge of the CAD cells to the mean low water line.

d. Other named and unnamed piers and wharves, shown on the drawings, will also require similar restrictions as described above.

e. See Section 01270 MEASUREMENT AND PAYMENT, Article OPTION ITEM: Item No. 0009, Additional CAD Capacity Construction with Ocean Disposal of Dredged Material. If the Option Item is exercised by the Government, allow non-Federal dredging projects to dispose of their material in CAD cell Number 3AR, as directed by the Contracting Officer. The non-Federal dredging projects will be required to have permits from the Corps of Engineers and 401 Water Quality Certifications from the State of Rhode Island to preform their dredging and to dispose the dredged material in Cell 3AR. The Contractor for this work shall coordinate his construction activities with the Contractors performing the non-Federal dredging projects. In case of dispute regarding work operations or the use of work areas, resolution will be by the Contracting Officer and his decision shall be final.

f. The Contractor shall start and complete the Cell construction and Cell filling work in the order of precedence in accordance with the Contractor's approved "Progress Schedule" required by Section 01110 SUMMARY OF WORK. In order to allow time for non-Federal projects to obtain the required permits and approvals to dispose dredged material in Cell 3AR, the Contractor shall schedule Cell number 3AR to be the last Cell constructed. Cell 3AR shall be capped following disposal of dredged material under this contract and by the non-Federal projects.

3.3 METHOD OF DISPOSAL

3.3.1 General

a. Provide for safe transportation and disposal of dredged materials. Transport and dispose of suitable dredged material at the RISDS, the upland disposal sites, and for capping material at the CAD cells, as indicated. Dispose of all unsuitable maintenance material within the CAD cells, as indicated. Except as otherwise authorized by the Contracting Officer in writing, no dumping shall be done unless an inspector appointed by the Contracting Officer is present at the time.

b. Deposit dredged material by self-dumping scow or barge. Do not remove loaded or partially loaded scows or barges from the dredge area until the load has been measured by the Contracting Officer. Notify the Contracting Officer when scows or barges are returned to the dredge area.

c. Misplaced Material Disposal: Material that is deposited elsewhere than in locations designated or approved by the Contracting Officer will not be paid for and the Contractor shall be required to remove such misplaced material and deposit it where directed at his expense.

3.3.2 Rhode Island Sound Disposal Site (RISDS)

a. The location of the RISDS is shown on the drawing attached at the end of this section. The RISDS is located approximately 13 miles south of the entrance to Narragansett Bay and 2 miles west of Site 69a, Jamestown Bridge Reef. The site center is located at 41°13'51"N; 71°22'49.16"W, datum NAD 83 ~~as indicated~~. Corner coordinates of this site are located at:

41°14'21.27"N 71°23'28.82"W
41°13'21.24"N 71°23'28.92"W
41°13'21.16"N 71°22'09.41"W
41°14'21.19"N 71°22'09.29"W

b. Ocean tugs towing loaded scows to the RISDS shall follow the Providence River Channel to the mouth of Narragansett Bay and then follow the shipping lanes in Rhode Island Sound to reach the site. This site is located 36 miles from Providence Harbor (i.e., Fox Point Reach).

c. The Contracting Officer will provide the Contractor with the coordinates of the locations within the RISDS for the dumping of each scow or group of scows. Whenever practicable, the Contracting Officer will require placement of dredged material from lower reaches with lower concentrations of contaminants and silt to be placed on top of and cap the dredged material from upper reaches. All disposal shall be done at the specified coordinates with the scow at a complete halt. This requirement must be followed except when weather or sea state create unsafe conditions, in which case disposal within 100 feet of the specified coordinates with

the scow moving only fast enough to maintain safe control (generally less than one knot) will be permitted. Disposal shall not be attempted if the above conditions cannot be met. Anticipated weather conditions shall be determined prior to departing for the disposal site.

3.3.3 Upland Disposal

a. The native sand and gravel material excavated from the CAD cells shall be transported in scows, off-loaded and disposed in the upland diked disposal area at the location shown on the drawings. The material disposed at the J&W upland site will be limited to mechanical offloading. No hydraulic equipment will be allowed.

The upland disposal area shall be constructed by the Contractor in accordance with Section 02330 UPLAND DISPOSAL AREA CONSTRUCTION. Except as otherwise authorized by the Contracting Officer in writing, no disposal of dredged material at the upland site shall be done unless a representative of the Contracting Officer is present at the time.

b. In depositing excavated material in the diked disposal area, provide and maintain necessary bulkheads, dikes, ditches, weirs, spillways, and other construction to confine and retain the fill in the areas and to facilitate dewatering of the material. Off-loading of dredged material into the disposal area shall be controlled and restricted to prevent overtopping the disposal area and to prevent exceedance of the specified water quality standards.

3.3.4 Alternative Disposal Sites

Bids received shall be based on utilizing only the above described areas. Alternate areas will not be considered until after the award of the contract. If, after the award of the contract, a disposal area other than that stipulated in these specifications is proposed, its acceptance will be subject to the approval of the Contracting Officer after an adjustment of the contract price if found necessary by the Contracting Officer to protect the Government interest. The Contractor shall obtain the written consent of the owners of the substitute grounds and furnish evidence thereof to the Contracting Officer. All expenses incurred in connection with providing and making available such disposal areas shall be borne by the Contractor, and all materials deposited thereon, and all operations in connection therewith, shall be at the Contractor's risk. Comply with rules and regulations of local port and harbor governing authorities.

3.4 SHOALING

If, before the contract is completed, shoaling occurs in any section previously accepted, including shoaling in the finished channel because of the natural lowering of the side slopes, redredging at contract price, within the limits of available funds may be done if agreeable to both the Contractor and the Contracting Officer.

3.5 FINAL CLEANUP

Final cleanup shall include the removal of all the Contractor's plant and equipment either for disposal or reuse. Plant, equipment, and materials to be disposed of shall only be disposed in a manner and at locations approved by the Contracting Officer. Unless otherwise approved by the Contracting Officer, the Contractor will not be permitted to abandon any equipment in the disposal area or other areas adjacent to the worksite.

Failure to promptly remove all plant, equipment, and materials upon completion of the dredging will be considered a delay in the completion of the final cleanup and demobilization work. In such case, the Government will exercise its right to remove any plant, equipment, and materials at the Contractor's expense.

-- End of Section --

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1 Volume: I
 2 Pages: 1 to 38

3 UNITED STATES ARMY CORPS OF ENGINEERS

4 - - - - -X

5 IN RE: :

6 PRE-BID CONFERENCE :

7 PROVIDENCE HARBOR :

8 - - - - -X

9

10 U.S. Army Corps of Engineers
 11 696 Virginia Road
 12 Concord, Massachusetts
 13 10:05 a.m.

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1 P R O C E E D I N G S

2 MR. O'DONNELL: All right. Why don't
3 we get started. Thanks for coming here.

4 We're -- we're having this meeting to
5 try to get everyone up to speed. There's been a
6 lot of questions after we've issued the -- the
7 plans and specs, so we wanted to take an
8 opportunity to -- to try to give you some more
9 information and let you ask some questions, so we
10 can -- we can, certainly, get some good bids.

11 I'm the PM. I'm Ed O'Donnell. I've
12 gotten my team here together to answer any of the
13 questions you might have. I would like to take the
14 opportunity to have everyone say who they are.

15 Again, I'm Ed O'Donnell with the Corps.

16 MR. CHAMPIGNY: Chris Champigny with
17 Weeks Marine.

18 MR. BURBELO: Mark Burbelo GZA.

19 MR. OLIVER: Larry Oliver. I am
20 (inaudible) with the Corps of Engineers.

21 MS. MURRAY: Maureen Murray, Assistant
22 chief of survey with the Corps of Engineers.

23 MR. JOHNSTON: Steve Johnston, chief of
24 Survey, Corps.

1 MR. YEN: Johnny Yen of the Corps.
2 MR. REZENDES: Tim Rezendes, Corps of
3 Engineers, New Bedford office, project engineer.
4 MR. FREDETTE: Tom Fredette, Regulatory,
5 Corps of Engineers.
6 MS. RAPOSA: Rachael Raposa,
7 Contracting, Corps of Engineers.
8 MR. DiLORENZO: Stephen DiLorenzo,
9 Regulatory, Corps of Engineers.
10 MR. BEAUDOIN: Maurice Beaudoin,
11 resident engineer for the Corps of Engineers out of
12 the New Bedford resident office.
13 MR. O'HARA: Steve O'Hara with Great
14 Lakes.
15 MR. JOHNSON: Richard Johnson with Great
16 Lakes.
17 MR. IKALAINEN: Alan Ikalainen with
18 Foster Wheeler Environmental.
19 MR. MEADER: Bob Meader with the Corps
20 and design.
21 MR. HAVERTY: Mike Haverty, Norfolk
22 Dredging.
23 MR. PENA: Carlos Pena, CLE
24 Environmental.

1 MR. WOOD: Bruce Wood with Jay Cashman,
2 Incorporated.

3 MR. NORTON: George Norton with the
4 Corps of Engineers' design division.

5 MR. O'DONNELL: Okay. I am pretty much
6 going to go over the basics to start with. Stop me
7 at any time if you have any questions. Once we get
8 through our stuff, you can ask more detailed
9 questions.

10 There's one amendment out there now.
11 You guys should just keep a close eye on the
12 website. I am sure there's going to be more
13 amendments as we go along.

14 The first thing I'd like to talk about
15 is the -- the limits of the suitable and unsuitable
16 material. I don't know if all of you can see this
17 or not, but I've got the -- the -- all the drawings
18 lined up here or at least all the drawings of the
19 channel.

20 This area here in the upper river that
21 I've highlighted in yellow is considered the
22 unsuitable material. That's material that can't go
23 to the ocean and has to be put in the CAD cells up
24 here. If you have any questions about that or

1 that's unclear, I know there's a lot of lines in
2 the drawings. Hopefully, that's -- that's pretty
3 clear (indicating).

4 The next area I'd like to point out is
5 this area right here is what we are going to be
6 using to cap the CAD cells. Once you're finished
7 with the CAD cell, you need to cap it with 3 feet
8 of material, and the material is going to come from
9 this reach of the project (indicating).

10 We don't want you to use any more than
11 3 feet of material for the cap, so it's not a sink
12 for material. Instead of going and taking it
13 offshore, you can put it in here. We only want
14 3 feet. If there's some consolidation of the
15 material in the CAD cell, we just want the 3 feet,
16 and we'll have that extra capacity for advanced
17 maintenance for the future.

18 There's an area -- actually, there may
19 not -- all of this material may not fit on the cap.
20 So from -- from here to here is the area where
21 you're going to be limited to 3,000 yards per dump.
22 So if -- if you don't use up all that per cap, from
23 here to here you're limited to a limited capacity
24 in your scow for each dump. We will be issuing an

1 amendment to try to clarify that.

2 There is going to be some private
3 dredging associated with the work. It's going to
4 be -- you're going to have to work it out with
5 whomever. There's a lot terminals in the upper
6 river that we want to dredge. There's also some
7 marinas. They're just getting their permit
8 information now. We're not sure who's going to be
9 dredging or what's going to be happening. We have
10 designed in additional capacity at the CAD cells
11 for the projects where the material is unsuitable.

12 What we have designed right now is only
13 capacity for the federal projects. There's -- if
14 we -- the private folks can give money to the
15 State, who will give us money, and we'll provide
16 extra capacity. We're going to have to negotiate
17 that afterwards, after the contract is awarded. So
18 there may be additional room needed in the last CAD
19 cell for some of the private dredging.

20 We are going to -- we've required -- if
21 you read the specs, we're required to use an
22 electronic tracking system. What we've modelled
23 that on is SAIC's ADISS system. Some of you should
24 be aware of that. That seems to be the best.

1 We need to track the scows, and we need
2 to better manage the disposal site, and that system
3 will help that. You don't have to use that, but it
4 needs to be similar to that or at least, you know,
5 the same capacity as the ADISS system.

6 Basically we've gone through a lot of
7 heartache. We've been coordinating this project
8 for ten years. There's been lots of claims that in
9 the past, the contractors short dumped quite a bit
10 by being able to track it and show it in realtime.
11 We know where you've dumped. We can show the
12 fishermen, No. You're mistaken. They actually
13 dumped in the disposal site. It will help you. It
14 will help us. It seems to be a pretty good
15 system.

16 The Upland area, we're -- we're having
17 about 215,000 yards of sand and gravel, and we do
18 want it to be sand and gravel. The CAD cells have
19 kind of a smorgasborg of sediments in them. We do
20 want sand and gravel to be taken out and placed at
21 the Upland area at the Johnson Whales site.

22 The people who own the property have
23 specified that it needs to be placed there
24 mechanically, so we can't do it hydraulically. If

1 you do bid it hydraulically, you'll be considered a
2 nonresponsive bidder.

3 So what we had done -- the Upland sites
4 over in this area here doesn't show in this
5 drawing, but our -- our thought was -- and we're
6 open to suggestions -- once the contractor bids,
7 take the material from the CAD cells and bring it
8 by scow. There's a channel, an old Navy channel,
9 that goes up here, and you can offload the material
10 onto the site from -- from here (indicating).

11 We're assuming that you can build the
12 containment dikes for the Upland site using the
13 material from the CAD cell. It's clean sand.
14 You'll need to compact it as you're building the --
15 the dike walls, and we don't think that's a
16 problem, provided you're using good sand and
17 gravel.

18 We are going to have a monitoring
19 contractor working for us and monitoring your
20 work. The monitoring is tied into the water
21 quality cert, which is at the end of the plans and
22 specs. You should review that and just kind of
23 understand it.

24 Failure of any of the tests means you

1 need to readjust your work somehow, and I'll ask
2 Larry to explain the monitoring work a little bit
3 more.

4 Go ahead, Larry.

5 MR. MEADER: Okay. Like Ed said,
6 there's going to be a separate contractor doing the
7 monitoring. The main thing for you guys to be
8 aware of, I think, is you're going to have to
9 modify some of your operations to accommodate the
10 monitor -- monitoring.

11 We'll be monitoring 11 disposal events,
12 and all of this, like I said, is in the water
13 quality cert. We're going to monitor 11 -- excuse
14 me -- disposal events for dissolved metals.

15 The first dredge disposal event will --
16 will occur within one hour after the time of high
17 tide in Providence Harbor, so the first sampling
18 event is going to occur right just following the
19 first disposal event into the CAD cells. So you
20 need to time that and other similar events, so that
21 we get the right tide range or the right tide
22 height to do the monitoring. So just be aware that
23 11 of the events you're going to have to modify
24 your -- your disposal to time it with the

1 monitoring.

2 It's -- I don't know if I need to go
3 through every one of the details here. I think I
4 probably don't, unless there's specific questions
5 about it, but out of the first 100 events for them
6 need to be monitored. Some of them will be during
7 the -- following the high tide; some of them will
8 be following low tide, so four following the high
9 tide and four following the low tide.

10 For the -- for the metals monitoring
11 the -- the samples will be collected 1,500 feet
12 from the disposal point, and then there will be
13 another type of monitoring, which is for the
14 toxicity, and those samples will be collected
15 either at Fields Point or upstream of the CAD cell
16 disposal area at the Washington Bridge, so that
17 the -- the monitoring contractor will be located a
18 little bit farther away from your operations for
19 those disposal monitoring events.

20 Then Ed was getting into the decision
21 criteria; what happens if we fail in one of these
22 samples. We don't expect these samples to fail.
23 We've done a lot of work in figuring out what the
24 concentrations are going to be following the -- the

1 disposal events, but if we do get a failing sample,
2 we would have to reduce the volume from the
3 original volume by one-third, and then we could
4 continue to -- to dispose with that one-third
5 reduced volume.

6 If that -- after that -- after we start
7 disposing with reduced volume, we'd follow that by
8 more testing. If that testing passes, then we
9 continue to dispose with that one-third reduced
10 volume. If we're -- we're going along and we're
11 disposing, and we'd like to get back to that
12 original disposal volume, we can write a letter to
13 the DEM and say, Listen, we think for this reason
14 that sample failed, and we can get back to that
15 original disposal volume, so -- so we're always
16 going to be trying to get back to disposing as much
17 material as we can.

18 If the second sampling fails, then we
19 would want to have -- we would have to reduce the
20 disposal volume again by a third and resample
21 again. The same thing would apply. If we sampled
22 again, and it didn't -- if it didn't fail again,
23 then we could look to increase back to the -- to
24 the previous disposal volume. If it did fail

1 again, then we'd be looking to dispose only during
2 slack tides with that reduced disposal volume.

3 We don't anticipate that we're going to
4 get this far down the line with these kind of
5 requirements, but that's the sequence. You reduce
6 the disposal volume and then eventually with
7 reduced disposal volume dispose during a slack
8 tide, so there would be less movement of the
9 plume. That's -- that's how the decision criteria
10 is expected to work.

11 Are we taking questions now or --

12 MR. O'CONNELL: If people have questions
13 now, feel free. If not we'll just --

14 MR. SATTLER: What would you do -- I'm
15 sorry. Russell Sattler, S-a-t-t-l-e-r, United
16 Retek Corporation.

17 Should the material fail, what will that
18 failed material state be?

19 MR. O'CONNELL: It's just the disposal
20 that would fail. It's -- we're testing the -- the
21 suspended solid plume from that. We're just
22 reducing the amount of volume until it passes.
23 What we've modeled is really, really conservative.
24 We don't really expect it to fail, but there's

1 always that possibility.

2 MR. SATTLER: Okay.

3 MR. MEADER: Anything else?

4 MR. O'CONNELL: You do the timing stuff
5 now?

6 MR. MEADER: Yeah.

7 Okay. As Ed said, we spent a lot of
8 time planning this project. It resulted in us
9 having a lot of requirements on how the work would
10 be done. What we've done is we've developed a
11 sequence which, hopefully, won't require us to stop
12 dredging, but it -- it minimizes the impacts to
13 environmental resources, so there's portions of the
14 channel where you can only work during certain
15 times of the year. I realize that you can't see
16 what I tried to draw in here before.

17 There will be no dredging or disposal
18 allowed north of Field's Point from 1 February to
19 30 March -- I'm sorry -- 30 April. It applies to
20 both dredging and CAD cell disposal in that reach.

21 Okay. From Bullock Point to 3,500 feet
22 south of Conimicut Point there's no dredging from
23 1 February to 30 March, so from here to here, and
24 the limits of dredging are from here down to here

1 (indicating).

2 In the Rumstick Neck Reach, 35 feet
3 south of Conimicut Point down to the end of
4 dredging in Rumstick Neck Reach, you can only
5 dredge during March and April. We wanted to have
6 that dredging happening during the rainy season, so
7 if there's any plume, it would close the shell --
8 shell fishing in the area. It would be closed,
9 anyway, because of the rain, so that's the reason
10 for that dredging window.

11 Then there's no dredging between Sabin
12 Point and Conimicut Point between the 1st of June
13 and the 14th of July. So we've gone through this,
14 and we've looked at different scenarios for
15 dredging, and we found that you could continuously
16 dredge and adhere to this sequence.

17 Any questions about the sequence or the
18 requirements? You'll come up with the sequence, I
19 guess.

20 MR. HAVERTY: Mike Haverly, Norfolk
21 Dredging.

22 The limit at the upper end there, what
23 is that Fox -- Fox Point Reach? That also includes
24 the CAD cell dredging, right?

1 MR. MEADER: Yeah. The CAD cells are
2 right in here (indicating).

3 MR. HAVERTY: Right.

4 MR. MEADER: Okay with that?

5 MR. O'CONNELL: We did get a question
6 about quantities by reach. The digital
7 information -- some of you already have it -- from
8 the survey is available from our survey section.
9 You can talk to either Steve or Maureen if you want
10 to get that data.

11 I'm going to ask Bob Meader to give us
12 an idea of the quantities by reach, and if you can
13 step up to the -- the drawing, Bob, it might help.
14 These are just approximate values. You need to
15 make, you know, the decision yourself what the
16 actual volumes are.

17 MR. MEADER: We'll start upstream and
18 work down toward Fox Point. You'll note that there
19 is a majority of work in the upper end. We're
20 going to be moving a total of, maybe, six million
21 yards, three million yards related to the upper end
22 primarily, because we got so many cells that we
23 have to dig. The other three million yards are
24 scattered throughout.

1 In the Fox Point Reach, you've got on
2 the order of, let's say -- and I'm not including
3 CAD cells on this. That's why my number is looking
4 a little strange here. Requirement material that
5 is suitable for open water disposal on the order
6 of, maybe, 200,000 yards. Unsuitable material,
7 material that's going to get placed in the CAD
8 cells, may be a million yards.

9 Fuller Rock Reach, you've got on the
10 order of a million yards. Only about 4,000 of that
11 is unsuitable. That would have to go into the CAD
12 cells. So primarily Fuller Rock, you're only
13 picking up the unsuitable right here at the very
14 tail end. Everything else is suitable for ocean
15 disposal, or you have the cap area. The cap area
16 is about 260,000. That material would be placed on
17 top of the CAD cells. The remaining of that
18 million yards out to the ocean.

19 Sabin Point -- I'm going to have fun
20 pronouncing some of these -- you've got about
21 600,000 yards out to the ocean up and down. Fuller
22 Point Reach, about 600,000, again, on that. Larry
23 pronounced the sea reach.

24 MR. MEADER: Conimicut Point.

1 AUDIENCE MEMBER: Conimicut.

2 MR. MEADER: Very good. 200,000.

3 Rumstick Neck, another 200,000, so that's basically
4 how that's split up.

5 MR. O'DONNELL: The suitable material is
6 going to be placed at Site 69B, and you probably
7 can't see it. It's at the bottom of that chart
8 over there. It's about 36 miles or so from the
9 middle of the project.

10 We're going to provide a buoy out there,
11 and we'll be providing some coordinates for -- for
12 the dumping activity. This is where the ADISS
13 system would -- would come in handy. You can dump
14 on coordinates and dump on various little boxes.

15 Tom, do you want to give a little more
16 on that?

17 MR. FREDETTE: Yup. Yup. One of the
18 objectives of the project is to create a fairly
19 flat feature out there as opposed to a peaked
20 mound, so we're going to try and distribute the
21 material across the disposal site.

22 There's also some water quality concerns
23 that we're going to address, so we will be coming
24 up with a list of coordinates and a sequence at

1 which material will be disposed of, and we'll work
2 with you on this as time goes along. We are going
3 to have to see what you come in with for a dredging
4 sequence and then work with that, but we'll be able
5 to provide you coordinates well in advance of where
6 we want you to go out of the disposal site.

7 There are going to be a series of math
8 and metric surveys that the government will conduct
9 at the disposal site. We will use those to adjust
10 the disposal as the project moves forward.

11 MR. O'DONNELL: We are going to try to
12 use some of the sand from the CAD cells to cover
13 the material out there, so we may be moving around
14 a little bit. We'll have one area and then cover
15 that. Depending on, again, your schedule, we're
16 going to have to work with you on what exactly your
17 schedule is and when you plan to dredge various
18 areas.

19 A couple of folks had asked for sediment
20 information. There is copy of the F -- the whole
21 FEIS back here, and there's some information on
22 sediment testing.

23 We do hope you go visit the site. If
24 there's a enough interest, I can -- certainly, you

1 can get into the harbor and look around on your
2 own, but the Upland site is fenced off and private
3 property, so you'd need permission to get in there.

4 If you do want to go visit the site,
5 give me a call and we can set something up, or
6 we'll just pick a day and -- and let everyone know
7 that that's available, and you can come visit it at
8 that time, but we do recommend you go look at the
9 site and see what you have to work with before you
10 bid on it.

11 Also, just another reminder. Just
12 keep -- keep an eye on the website for any
13 changes. I know we're going to have another
14 amendment come out, so just -- just keep track of
15 that.

16 Right now I'm just going to open it up
17 for questions anyone has.

18 MR. SATTLER: The quality and quantity
19 of the Upland disposal material, can you comment on
20 that, please. Russ Sattler, United Retek.

21 MR. O'DONNELL: We want it to be
22 primarily sand and gravel. We realize there's
23 going to be some work for the contractor. You're
24 going to have to look at the borings that we did

1 and, you know, figure out for yourselves what -- we
2 want it to be at least 95 percent sand and gravel,
3 so we're not putting silt and clay up in this
4 Upland site for the university that's going to be
5 using it for a fill.

6 MR. SATTLER: Uh-huh. Quantity?

7 MR. O'DONNELL: 215,000 cubic yards.

8 MR. SATTLER: Not including the
9 materials for the dikes, correct?

10 MR. O'DONNELL: No. That includes the
11 material for the dikes.

12 MR. SATTLER: So the total Upland
13 disposal will be, hopefully, 90 percent of sand and
14 gravel of Upland disposal type non-contaminated
15 material?

16 MR. O'DONNELL: Material from the CAD
17 cells.

18 MR. SATTLER: Right.

19 Further question, then. Should it not
20 be acceptable -- let's say there's a -- there's a
21 lot of silt or material that's not structurally
22 sound, what do you --

23 MR. O'DONNELL: It goes offshore.

24 MR. SATTLER: It goes offshore. Okay.

1 So anything that's not sand and gravel
2 that would be suitable for reuse would then be
3 taken for offshore disposal. Okay.

4 MR. O'DONNELL: Actually, Bob had made
5 that drawing there. Why don't you just go over
6 that, Bob, and it's a cross-section of a typical
7 CAD cell.

8 MR. MEADER: Can you -- can you all see
9 this, besides Carlos looking in the back here?

10 It's hard to -- hard to visualize, but
11 let's assume that you're with me. We have existing
12 bottom. We know everywhere in the channel that
13 we're dredging we want to take it down to at
14 least -- required down to 41 over that 1 foot down
15 to 42. In the area of the CAD cells, we have to
16 remove this material, and then we have to get into
17 digging the hole.

18 What I was envisioning is the CAD cell
19 would be worked on only working on the CAD cell,
20 not getting material outside of the borders of the
21 CAD cells, so that you're having to deal with --
22 with this unsuitable material outside the borders
23 as well.

24 Only working on the CAD cell, you have

1 to dig down. Depending on where you are, you may
2 have unsuitable material down below. In most
3 cases, you will have it down below 42 foot. You
4 may have it down below the 45 foot, so that you may
5 have dug down 46, 47, 48, somewhere in that range.
6 All this material is going to eventually reside in
7 the CAD cell.

8 I am envisioning that the contractor,
9 similar to what we did in Boston, is going to start
10 with a starter cell. You will remove and store
11 someplace this unsuitable material, because you
12 have no place to put it. You cannot take it out to
13 the ocean for disposal out there.

14 Once this material has been removed,
15 stored, probably being stored in the scow, like we
16 did in Boston, or scows, you will then continue
17 excavating the CAD cell. This, by the way, is not
18 to -- it's to scale. We really don't have as much
19 unsuitable -- a small amount of suitable.

20 Once you have completed the first cell,
21 that material that you're storing can get disposed
22 in that cell. We'll move on to the next cell.
23 Then if we've done it or if you have done it the
24 way I'm envisioning, we will take the unsuitable

1 material off of the top of the next cell, place it
2 within the starter cell, and then you will excavate
3 that into the suitable material, which can go out
4 to the ocean in the second cell, so on and so on.

5 When you are all done, you will have
6 filled each of these cells back up to elevation 45,
7 and then there's going to be this 3 foot cap. The
8 material coming from the location area where -- the
9 cap will be unlike we did in Boston. This cap is
10 going to be kind of silty material, so we're going
11 to be placing unsuitable silty material into the
12 cell, and then we're going to be placing a cap of
13 the suitable silty material on top of the cell
14 bring it up only to the elevation 42. That's why
15 we only want that 3 foot cap, because we can't come
16 up into our channel.

17 I'm assuming that when we are digging
18 the unsuitable material, it's going to be silty
19 and, therefore, is going to lay back quite a bit,
20 and I've got one of the -- when you get down into
21 the more suitable disposal material, it's little
22 bit stiffer, one on three side slopes. Boston, we
23 were digging almost vertical. It's not going to
24 happen, to my knowledge, here in Providence.

1 All right. Now I've sort of gone off
2 on a couple of tangents, but it may open up enough
3 questions, so you may have something to ask.

4 MR. WOOD: Bruce Wood with Cashman.

5 This material here, this unsuitable, in
6 some cases, it goes down below the 42?

7 MR. MEADER: Right.

8 MR. WOOD: Would we get paid for
9 unsuitable material to where we dig it down to, or
10 do we only get paid down to the minus 42?

11 MR. O'CONNELL: You get paid for all of
12 it that you're digging, so you get paid down -- if
13 you went to 46 feet, you get paid.

14 MR. WOOD: As unsuitable?

15 MR. O'DONNELL: As unsuitable.

16 MR. MEADER: You have to -- you have to
17 treat all the unsuitable as if it's going into the
18 cap. I mean, if you have -- the way that's set up
19 here is there's one item for unsuitable material,
20 and there's another item for suitable. I don't
21 remember the items numbers, but...

22 MR. WOOD: Okay. But what I'm saying is
23 this overdepth that is unsuitable, which is, even
24 if you're outside the cell, you're not going to get

1 paid for it, but if you're inside the cell, you go
2 down to wherever, you're going to get paid for it?

3 MR. MEADER: Yes. That was a good
4 point. If you're outside of the cell, anything
5 below 40 feet you're not being paid for.

6 MR. WOOD: Based on the 105?

7 MR. MEADER: Based on the 105.

8 MR. WOOD: What -- let's say you do go
9 down to the 46, and you get some sloughing in
10 here --

11 MR. MEADER: If it sloughs in underneath
12 the 42, right now I think that we're not paying.

13 MR. WOOD: Okay.

14 MR. MEADER: We have to think about
15 that, but right now...

16 MR. O'DONNELL: And we are having the
17 one on five side slopes pretty conservative, so
18 we're assuming that there's going to be no
19 sloughing in.

20 MR. HAVERTY: Mike Haverly.

21 Is it -- the material below 42 in the
22 cell that you're calling unsuitable, is that going
23 back in the cell or out in the ocean? I was under
24 the impression below 42, it was going to the ocean.

1 MR. MEADER: Then we need to correct
2 that. If it is unsuitable below 42 --
3 MR. HAVERTY: It goes back in the cell.
4 MR. MEADER: If it's unsuitable, it
5 cannot go to the ocean. That's our definition.
6 Suitable for open water disposal. Unsuitable for
7 open water disposal, and as you are working on
8 creating the cell, if you run into unsuitable
9 material, you must put that into a cell.
10 MR. HAVERTY: Even after you've stripped
11 it, so to speak?
12 MR. MEADER: For instance, if we have
13 another cell available already -- and we're working
14 on this one -- and we run into unsuitable material
15 up to, let's say, elevation 46, that anything that
16 you run into that's unsuitable --
17 MR. O'DONNELL: We are going to give you
18 the elevations to go to. We are going to tell you
19 the cell. We're going to tell you go to X number
20 of feet and consider that all unsuitable.
21 MR. HAVERTY: That will come out in an
22 amendment?
23 MR. O'DONNELL: Yeah.
24 MR. WOOD: Was that -- was that based on

1 your quantities for unsuitable?

2 MR. MEADER: I'm going to change the
3 depths on two of my cells to make sure that -- that
4 we can fit it into how -- it's just the footprint
5 of the cell may end up changing a little bit,
6 because what I'm going to do is I'm towing to lower
7 it in a couple of places.

8 MR. NORTON: George Norton.
9 Just a point of clarification. We are
10 defining suitable and unsuitable by an elevation,
11 not by the nature of the material. Does that make
12 sense to you? We are going to tell you where the
13 elevation of the unsuitable and suitable layer is.

14 AUDIENCE MEMBER: And that's the amount
15 of material that would be required to be stored
16 temporarily while we would be digging the other
17 one?

18 MR. MEADER: For the starter cell; yes,
19 that's true.

20 MR. HAVERTY: Okay. And there will be
21 no unsuitable material below the suitable material
22 we can assume?

23 MR. O'DONNELL: Correct.

24 MR. MEADER: That's correct.

1 AUDIENCE MEMBER: With respect to ocean
2 disposal, with respect -- I think, clarification
3 for the J&W site, there is a limitation as to what
4 the quality of the material that can be taken at
5 the job on the Whales site, right?

6 MR. O'CONNELL: Correct.

7 AUDIENCE MEMBER: Sand and gravel.

8 MR. O'DONNELL: As I mentioned before,
9 we want to put sand and gravel over at the Johnson
10 Whales site. All the material below what we're
11 considering unsuitable is suitable, but we do need
12 to find the pockets of sand and gravel to use for
13 that Upland site.

14 AUDIENCE MEMBER: Stratified.

15 MR. FREDETTE: Tom Fredette.

16 Just to clarify this whole issue a
17 little bit more, we've -- we've done testing to
18 make that determination of where suitable and
19 unsuitable is, and those are the elevations that
20 we're going to give you. There won't be any need
21 for testing at the time of dredging to confirm
22 that, so just to clarify, that decision was based
23 upon previous sampling and testing.

24 MR. O'DONNELL: And we want to make it

1 as easy as possible by giving you -- we're going
2 kind of conservative and, probably, going deeper
3 than we need to in, maybe, some areas, but to make
4 it easier for us to figure it out and for you to
5 figure it out, we're just going to give you a level
6 plane to work with.

7 MR. MEADER: Anything else on CAD cell
8 construction?

9 AUDIENCE MEMBER: One question. So
10 there's a layer of material within the CAD cells
11 that doesn't get paid as maintenance dredging,
12 doesn't get paid as ocean disposal, but gets paid
13 at -- for temporary storage in placement, correct?

14 MR. O'DONNELL: That would be the
15 unsuitable material.

16 AUDIENCE MEMBER: Right.

17 MR. O'DONNELL: It gets all paid as
18 unsuitable.

19 AUDIENCE MEMBER: We may need to change
20 our spec, update items.

21 MR. MEADER: We'll have to talk. To me,
22 it looks like it's all unsuitable. Yes, they do
23 have to store it to start with. In Boston, we
24 stored unsuitable, but we did not make a specific

1 10,000 yards as being stored temporarily.

2 AUDIENCE MEMBER: We may not get paid

3 for that --

4 MR. O'CONNELL: No. Well, we can

5 discuss that later.

6 AUDIENCE MEMBER: No?

7 MR. O'DONNELL: It's just unsuitable.

8 MR. MEADER: Anything else? Okay.

9 MR. O'DONNELL: Any other questions?

10 MR. CHAMPIGNY: I have one more. Chris

11 Champigny with Weeks Marine.

12 The side slopes for the CAD cells, you

13 said you're not on -- they stood up in the Boston

14 Harbor. Are you going to be flexible? In other

15 words, would the side slopes -- if we get down to

16 the elevation, the required elevation, and the side

17 slopes, they are steeper than the one on three, are

18 you going to make us dig the side slopes?

19 MR. MEADER: No. If you get down to the

20 elevation and you -- and we're getting a steeper

21 slope, all that does is make my cell have more

22 capacity, so I'm happy.

23 MR. O'DONNELL: But if it doesn't stand

24 up --

1 AUDIENCE MEMBER: You got to -- you've
2 got to qualify that whole thing. It's a subject of
3 discussion.

4 MR. HAVERTY: Mike Havertry.
5 The CAD cell construction, are you
6 saying, then, if the slopes -- if you can achieve a
7 steeper slope, we can dig beyond those limits and
8 still get paid, or are we going to be paid for
9 everything that we remove out of the cell, or are
10 we just being paid to the template that you guys
11 defined?

12 MR. O'DONNELL: That's something we will
13 have to work out. In Boston, we paid for whatever
14 they dug. We originally -- what was the original
15 slope, one on three or one on two?

16 MR. MEADER: It was one on three, and I
17 think they came up less than one on two.

18 MR. O'DONNELL: Boston was Boston blue
19 clay. You know, I think they ran into a situation
20 where it would hold, you know, a vertical slope.

21 MR. HAVERTY: Right.

22 MR. O'DONNELL: It's not going to be the
23 case here. It's different material.

24 We're certainly -- we're not going to

1 pay you any more than the capacity needed for the
2 unsuitable stuff, so we're not going to be paying
3 you to dig to China.

4 MR. HAVERTY: But you guys aren't
5 opposed to, maybe -- if we can achieve a steeper
6 slope, digging beyond those slope limits, as long
7 as we don't get carried away?

8 MR. O'DONNELL: Yeah. We can't
9 guarantee that, but you know, as we did in Boston,
10 we're -- we're willing to consider it to make the
11 -- the cells smaller.

12 AUDIENCE MEMBER: There will be less of
13 them if we do that.

14 MR. O'DONNELL: Yeah.

15 MR. MEADER: Which also brought up the
16 point about -- I think there was a question, can we
17 build one giant cell? If you can, go for it,
18 because it saves space in the river, but I don't
19 think that you're able to store the unsuitable
20 material successfully in order to create this large
21 cell.

22 MR. HAVERTY: But there's nothing
23 permit-wise that prevents --

24 MR. O'CONNELL: No.

1 MR. HAVERTY: -- that?

2 MR. O'CONNELL: We're -- we're willing
3 to consider, as with all of our projects, any
4 conceptual plan you can come up with as long as it
5 works. We -- we believe we have something that
6 works. If you can convince us that -- that it
7 works, yeah, but you're taking a risk.

8 MR. WOOD: Bruce Wood with Cashman
9 again.

10 You said that you're going to look for
11 your specific material, sand and gravel, to both
12 build the dike and put the material inside. Are
13 you going to define those limits on the plans? So
14 how -- how do we get paid -- how do we get paid to
15 take -- I mean, we got a survey?

16 MR. O'DONNELL: We'll give you the
17 borings. You need to decide yourselves where you
18 can find that material.

19 MR. WOOD: We can take that off the
20 plans, but if we get -- we get into an area, and
21 you only have so many borings. If we get into an
22 area and you find a area of silty material and
23 you're set up to do this offloading, what -- what
24 do you do?

1 MR. O'DONNELL: Take it offshore.

2 MR. WOOD: Well, what if we've already
3 started putting in a hopper scow that doesn't --
4 doesn't open?

5 MR. O'DONNELL: If you're offloading it
6 by hopper, you -- you wouldn't get the contract.

7 MR. WOOD: No. I mean a closed -- a
8 closed hopper. Not a dump -- not a dump scow. How
9 do you measure that? The building of the dike, the
10 way I read, is lump sum. The material going Upland
11 is one item, and the material going out to sea is
12 another item, so if you're going along, and you're
13 saying, well, I got this layer in here that I'm
14 going to take to Upland, well, it goes down like
15 that, so you're doing your operation. Then
16 you're -- you're getting into some material that's
17 not suitable. What do you do, stop survey it, go
18 on, do something else and then come back and do it
19 again?

20 MR. BEAUDOIN: The payment for the
21 material for the disposal site is by the cubic yard
22 in place at the disposal site.

23 MR. WOOD: You subtract that out?

24 MR. BEAUDOIN: You'd have to -- we'd

1 have to do a calculation thereafter and, you know,
2 figure out what went to the disposal site. The
3 idea is to survey the land with the disposal site
4 in place.

5 MR. WOOD: And then you would subtract
6 that from the total amount of material that you
7 take out of there?

8 MR. BEAUDOIN: I guess, that's the only
9 alternative. Yeah. That's the only way I can
10 think of doing it.

11 MR. WOOD: But it's still going to be
12 subjective on what material was suitable to go
13 upland and suitable to go out to sea?

14 MR. BEAUDOIN: No comment.

15 MR. O'DONNELL: Anything else?

16 Again, there's some information over
17 here, if you need it.

18 MR. HAVERTY: Mike Haverty.

19 I was wondering if we can get some more
20 information on the geometry of the CAD cells. I
21 did some rough calculations and came up with a
22 little more quantity, and I just wasn't sure if I
23 was doing it right.

24 MR. O'DONNELL: We are working on it

1 and --

2 MR. HAVERTY: Okay.

3 MR. O'DONNELL: -- if it's changed,

4 there will certainly be an amendment --

5 MR. HAVERTY: Okay.

6 MR. O'DONNELL: -- but I'll let you

7 know.

8 MR. HAVERTY: Okay.

9 MR. O'DONNELL: All right. No more

10 questions?

11 Certainly, you guys can call in. Feel

12 free to call anytime if you have any more questions

13 as you're doing your estimate.

14 MR. MEADER: Can I make one more point.

15 The footprint that you see on Drawing

16 C12 showing the CAD cells, that's -- the footprint

17 is at elevation 42. That may have an impact on how

18 you were calculating --

19 MR. HAVERTY: It slopes inward.

20 MR. MEADER: Right. It slopes -- it

21 slopes down and inward.

22 MR. HAVERTY: On all four sides, right,

23 all of them?

24 MR. MEADER: Correct, all four. Just

1 like a -- an inverted Chunky. That's what I call
2 it.

3 MR. WOOD: What's the formula?

4 MR. MEADER: Trade secret.

5 MR. O'DONNELL: All right. Thanks for
6 coming.

7 (Whereupon the conference
8 concluded at 10:50 p.m.)

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C E R T I F I C A T E

I, Valerie Rae Johnston, Professional Shorthand
Reporter, do hereby certify that the foregoing
transcript, Volume I is a true and accurate
transcription of my stenographic notes taken on
October 22, 2002.

Valerie Rae Johnston

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